Eugene B. Power
University Microfilms
313 N. First St.
Ann Arbor, Mich.

-1-

INDUSTRIAL QUALITY CONTROL

In This Issue

How to Lose at the Quality Control Game

Final Report,
Special Committee on Professional Development

Annual Report of the Board of Directors
American Society for Quality Control

JOURNAL OF THE AMERICAN SOCIETY FOR QUALITY CONTROL

SHEFFIELD ELECTRONIC INSTRUMENTS ASSURE HIGHER PRECISION IN YOUR GAGE LABORATORY

ACCUTRON COMPARATOR

Amplifications (Dual): 1000/2000, 2500/5000, 5000/10000, 10000/20000, 20000/40000.
Vertical capacity: 5¼".
Gaging pressure (oz.): 2—4—8—16—40.

ACCUTRON LEADCHEK

Amplifications (Dual): 1000/2000, 2500/5000.
Capacity: 10" dia.—36" long. Micrometer dial graduated to "tenths".

ACCUTRON GAGE BLOCK COMPARATOR

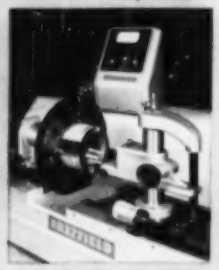
Amplifications (Dual): 10000/20000, 20000/40000, 50000/100000. Capacity: 0"—4".
Gaging pressure (oz.): 2—4—8—16—40.

ACCUTRON INTERNALCHEK—MODEL N-7

Amplifications (Dual): 1000/2000, 2500/5000, 5000/10000.
Gaging dia.: .370"—12".
Gaging depth: 1½".

ACCUTRON RING CHECKING INSTRUMENT

Amplifications (Dual): 1000/2000.
Min. size of work: 1" ID. Depth: 5½".



ACCUTRON INTERNAL DIMENSION GAGE

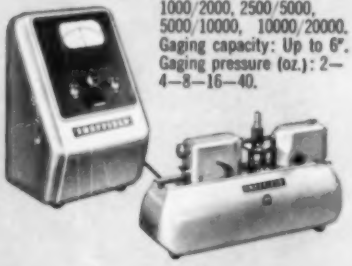
Amplifications (Dual): 1000/2000, 2500/5000, 5000/10000, 10000/20000,
Capacity: 4¼"—36¾".

ACCUTRON AMPLIFIER AND ELECTRO-JET PICK-UP UNIT

Amplifications (Dual): 1000/2000, 2500/5000, 5000/10000, 10000/20000, 20000/40000, 50000/100000.

ACCUTRON HORIZONTAL EXTERNAL COMPARATOR

Amplifications (Dual): 1000/2000, 2500/5000, 5000/10000, 10000/20000.
Gaging capacity: Up to 6".
Gaging pressure (oz.): 2—4—8—16—40.



ACCUTRON HEIGHT INDICATOR

Amplification (Dual): 1000/2000, Vertical range: 0"—26".

For Detailed Information on any of these instruments, write to the Sheffield Corporation, Dayton 1, Ohio, U.S.A., Dept. 22.

MICRO-HARDNESS TESTER

Vertical capacity: 2⅛".
Vice capacity: 1 1/16".
Microscope magnifications: 200 x and 400 x.

the SHEFFIELD corporation
of Bendix Aviation

manufacture and measurement for mankind

7715

Made in West Germany

For utmost accuracy and versatility

CARL ZEISS

UNIVERSAL MEASURING MICROSCOPE

•

Combines a series of different measuring instruments

•

This newest instrument enables you to handle the most varied problems with the greatest ease. Measurements can be made in plane rectangular and polar coordinates as well as in three-space rectangular and cylindrical coordinates.

The instrument embodies high precision glass scales and circles which can be read respectively to .00005 inch and 1′ of arc. By means of a new beam-splitting device, line and center symmetrical measurements can be made by a single or double reversed image in complementary colors. Certainty of setting is thereby greatly increased, and extremely difficult precision parts can be checked in far shorter time, with higher accuracy than ever before.

An optical internal-measuring device permits measurements of smallest holes without any physical pressure.

Inclined binocular tube affords most comfortable viewing. Push-button control automatically projects the specimen image and all scales into binocular tube. Offers many other features such as comparison drawing device, projection and photographic attachments, etc.

Write for booklet on this most advanced instrument

CARL ZEISS, INC.

485 FIFTH AVENUE, NEW YORK 17, N. Y.

COMPLETE SERVICE FACILITIES

EDITORIAL BOARD

MASON E. WESCOTT, *Chairman*
Rutgers • The State University, New Brunswick, N. J.

ALBERT H. BOWKER
Stanford University

IRVING W. BURR
Purdue University

A. C. COHEN, JR.
University of Georgia

CECIL C. CRAIG
University of Michigan

HAROLD F. DODGE
Rutgers • The State University

A. V. FEIGENBAUM
General Electric Co.

ENOCH B. FERRELL
Bell Telephone Laboratories, Inc.

FRANK E. GRUBBS
Aberdeen Proving Grounds

DAME S. HAMBY
North Carolina State College

CHARLES R. HICKS
Purdue University

HOWARD L. JONES
University of Chicago

GAYLE W. MCELRATH
University of Minnesota

CARL E. NOBLE
Kimberly-Clark Corp.

MARY N. TORREY
Bell Telephone Laboratories, Inc.

EDWARD M. SCHROCK
American Radiator and Standard Sanitary Corp.

1959-60 SOCIETY OFFICERS

President
C. E. FISHER
Bell Telephone Laboratories, Inc.
New York, N. Y.

Vice Presidents
L. S. EICHELBERGER
A. O. Smith Corp.
Milwaukee, Wis.

A. V. FEIGENBAUM
General Electric Co.
New York, N. Y.

J. Y. MCCLURE
Convair Div. of
General Dynamics Corp.
Fort Worth, Texas

ELLIS R. OTT
Rutgers • The State University
New Brunswick, N. J.

Executive Secretary
DAVID S. CHAMBERS
University of Tennessee
Knoxville, Tenn.

Treasurer
ALLAN M. HULL
United Air Lines
San Francisco, Calif.

Junior Past President
LEON BASS
General Electric Co.
Cincinnati, Ohio

1959-60 EXECUTIVE DIRECTORS

H. DAVIS BIRCH
General Electric Co.
Cincinnati, Ohio

ALLIN P. DEACON
Deacon & Associates
Brantford, Ont.

GERALD J. LIEBERMAN
Stanford University
Stanford, Calif.

WARREN R. PURCELL
Raytheon Mfg. Co.
Newton, Mass.

A. W. WORTHAM
Texas Instruments, Inc.
Dallas, Texas

ADVISORY COUNCIL

E. U. CONDON, *Chairman*
Department of Physics
Washington University
St. Louis, Missouri

M. HERBERT EISENHART, *Chairman*
Bausch & Lomb Optical Co.
Rochester, New York

HERMON F. SAFFORD, *President*
Ohio Rubber Co.
Willoughby, Ohio

WALTER A. SHEWHART, *Retired*
Bell Telephone Laboratories, Inc.
Murray Hill, New Jersey

DIVISIONS OF ASQC

Administrative Applications Division
HARRY G. ROMIG
Paper-Mate Mfg. Co.
Culver City, Calif.

Aircraft & Missile Division
WM. A. MACCREHAN, JR.
Bendix Radio Division
Towson, Md.

Automotive Division
OWEN F. KEELER
Chrysler Corp.
Dodge Division
Detroit, Mich.

Chemical Division
V. B. SHELBURNE
The Carborundum Co.
Niagara Falls, N. Y.

Electronics Division
GORDON BECKHART
Radio Corporation of America
Camden, N. J.

Textile Division
R. G. MITCHELL
International Latex Corp.
Dover, Dela.

Industrial Quality Control is published monthly by the American Society for Quality Control, Inc. Entered as second-class matter on Sept. 18, 1950 at the post office at Milwaukee, Wis.

Industrial Quality Control is sent to all members of the Society as one of the privileges of membership. Subscriptions from non-members are not accepted. Subscriptions for members only are $3.00 of the annual membership dues. Subscriptions for company, public, and university libraries are: 1 yr.—$9.00; 2 yrs.—$17.00; 3 yrs.—$25.00; 5 yrs.—$40.00. Back issues of Vols. I-X are available at $6.00 per volume including index; Vol. XI, $9.00; XII—XV, $10.00 ea. Individual copies are $1.00 each. Microfilm editions by volume are also available. The cost per volume is: I-VII, $10.00; VIII, $1.50; IX, X, $1.60 ea.; XI, $1.70; XII, $1.85; XIII, XIV, $2.00 ea.

Orders for library subscriptions, back issues, and microfilm editions should be accompanied by remittance made payable to the American Society for Quality Control, Inc. *Orders under $3.00 must be accompanied by remittance.*

Industrial Quality Control is regularly indexed in the *APPLIED SCIENCE & TECHNOLOGY INDEX* published by The H. W. Wilson Company, 950 University Avenue, New York 52, N. Y.

Neither this magazine, nor any portion of it may be copied or otherwise reproduced without written permission of the copyright owner. Requests for copyright release should be addressed to the editor, Mason E. Wescott. The statements and opinions given in the articles and papers in *Industrial Quality Control* are the views of the authors and are not necessarily those of the Society.

Notification of address change should be sent to the secretary of your section and to the Executive Secretary's office. Allow approximately seven weeks for the change to become effective.

Executive Secretary and Publications office: Rm. 6197 Plankinton Bldg., 161 West Wisconsin Avenue, Milwaukee 3, Wisconsin. Society's New York Address: Rm. 965, 463 West St., New York 14, N. Y.

Address all correspondence to American Society for Quality Control, Inc., Rm. 6197 Plankinton Bldg., 161 West Wisconsin Ave., Milwaukee 3, Wisconsin.

Copyright 1959
American Society for Quality Control, Inc.
Printed in U.S.A. All rights reserved

INDUSTRIAL QUALITY CONTROL

Vol. XVI, No. 3 October, 1959

EDITOR:

Mason E. Wescott
Rutgers • The State University
New Brunswick, N. J.

DEPARTMENT EDITORS:

W. D. Baten, Book Reviews

P. C. Clifford, T. A. Budne, Problems

Ellis R. Ott, Practical Aids

R. A. Wylie, What's New

J. M. Juran, Management's Corner

M. E. Wescott, Scrap Box

Paul A. Robert, Supervisor's Circle

Thomas M. Kearney, Section Briefs

D. S. Chambers, ASQC News

Contents

ARTICLES

7 **Annual Report of the Board of Directors**
AMERICAN SOCIETY FOR QUALITY CONTROL, INC.
000:00:000

14 **How to Lose at the Quality Control Game**
BRAINARD E. SOOY 310; 331:70; 80:426; 427
The author gives some pointers on how to be a good loser in the Quality Control game. Profitless Printing Company recently hired George, a QC engineer, in a sincere effort to reduce profits and therefore taxes. George in turn worked out a budget that called for a superintendent of Quality Control, three foremen and a pair of blondes for his office. Alas—poor George—I knew him well!

17 **Final Report, Special Committee on Professional Development**
A. V. FEIGENBAUM, Chairman, and R. M. BERG, Secretary
000:00:000
The work of the **ad hoc** committee is now considered to be complete. This report has been prepared to summarize the pertinent work of the group and to review the present status of the professional development project.

DEPARTMENTS

What's New 24
Section Briefs 28
Section Calendar 34
ASQC Announces 36
Product Education Service 37
Clinics, Conferences, and Courses 39
Positions Available 40
Consulting Services 40

AMERICAN SOCIETY FOR QUALITY CONTROL, INC.

Managing Editor
George R. Foster

Administrative Secretary
William P. Youngclaus, Jr.

Office Manager
Jean Truettner

Room 6197 Plankinton Bldg. 161 West Wisconsin Avenue Milwaukee 3, Wisconsin

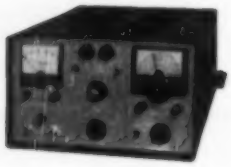
CURTISS-WRIGHT, your most complete source

ULTRASONIC Immersion Contact **RADIOGRAPHIC**

Curtiss-Wright equipment embraces all the principal techniques of non-destructive testing. For this reason our engineering staff can make unbiased recommendations as to the testing method best suited to your particular operation. Their judgment need not be limited by lack of machinery or method necessary to solve your problem, nor by any special product interest. We invite your inquiries and will be pleased to study your specific requirements in order to help you select the optimum testing method.

ULTRASONIC

IMMERSCOPE—After three years, *still* the industry standard for immersed ultrasonic detection of flaws in materials. The Curtiss-Wright Immerscope is specially designed to take full advantage of the increased sensitivity, resolution, and adaptability inherent in immersion testing. Internal defects such as segregations, laminations, inclusions, cracks, stringers, porosity, etc., are easily detected, located and displayed for evaluation.



ECHOMETER—Low cost, easy-to-operate ultrasonic contact inspection instrument. Makes repetitive production-line inspection a simple process requiring no interpretive skill or special training. In repetitive inspection of similar objects for similar defects, where predetermined standards can be set, the Echometer panel lights and buzzer provide a direct Go, No-Go indication. A meter also indicates the relative size of any flaws present.

COMPLETE, INTEGRATED ULTRASONIC INSPECTION SYSTEMS—Including tank and scanning mechanisms, X-Y recorders that provide permanent records, materials handling devices and all accessories for rapidly inspecting parts under production conditions.

RADIOGRAPHIC

GENERAL PURPOSE CAMERA—Performs safe, simple and fast gamma ray radiographic inspection of welds, forgings, castings. Small, lightweight camera can be used in beam shots, or spherical coverage via push-rod. Can be hand-carried.

PUFF CAMERA—Ideal for radiographic inspection of welds, forgings and castings that are difficult to reach . . . a small, flexible camera head and reinforced source cable permit insertion through tiny openings leading to otherwise inaccessible areas. Gamma source itself is propelled by compressed air.

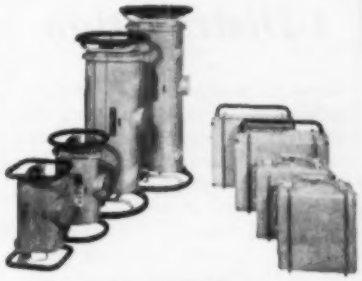
Curtiss-Wright Applications Engineering Department Engineers will gladly investigate your operations and recommend appropriate testing methods and equipment. For complete descriptive literature on any of the products listed, write to:

for non-destructive testing equipment

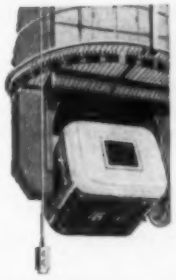
X-Ray
Gamma

THERMOMETRIC Paints & Crayons

FEDREX PORTABLE X-RAY UNITS—Extraordinary technical features plus lightest weight per Kv output make these sets unequalled tools for a multitude of inspection jobs. High ma output, long duty cycle and rugged construction are features of these units. 140 kv, 160 kv, 200 kv and 260 kv units provide controllable penetration from ¼″ to 3″ in steel. For an example of this controllable penetration, consider the 140 kv unit. It has 5 ma—*over twice as much power as most competitive units*. Its kv can be varied from 30 kv to 140 kv, the broadest range of any similar equipment. *Both* kv and ma are separately variable. Many additional performance and safety features are also included. Yet its price is no higher than units having fewer features and lower power—$2800.00.



BROAD BEAM STEREO BETATRON—Large 31 MeV unit for inspection of medium to large-sized objects: shafts, uranium rods for reactors, welded seams, massive turbine blades, ship propellers, Pelton wheels, etc. Betatron will radiograph steel, for example, up to 20 inches thick. Device generates high intensity, hard gamma rays through particle acceleration.



THERMOMETRIC

DETECTOTEMP—A variety of temperature-indicating paints which change their original color when certain temperatures are reached. Most changes are permanent, for observations any time after test. DetectoTemp adheres to all metals, glass, brickwork, insulating and ceramic materials, indicating temperatures in a range of 104° to 2912° F.

THERMOCHROM—Thermochrom sticks are temperature-indicating crayons—their marks change color at certain temperature levels. Easily recognizable changes register temperatures from 149° to 1238° F. Crayons can be carried in pockets. They are highly useful in processing of pressed parts, controlling temperatures in dies, heat-treating of light metals, glass-pressing, annealing and similar operations.

DISTRIBUTORS

Atlantex Corp.,
625 McGrath Hwy., Somerville, Mass.

Gamma Industries,
2255 Ted Dunham St., Baton Rouge, La.

Industrial Equipment Co.,
1161 Cherry St., San Carlos, Calif.

Industrial Radiography Supply,
5414 Schuler St., Houston, Texas

Keleket of Florida,
511 Northeast 15th St., Miami, Fla.

Michigan X-ray Sales,
13931 Oakland, Highland Park 3, Mich.

Singleton X-ray,
512 E. 18th St., Kansas City, Mo.

Vogel X-ray Co.,
1114 Union Ave., Memphis 4, Tenn.

X-ray Services, Inc., 4122 So. Broadway, Los Angeles 37, Calif.

SALES ENGINEERS

Irwin J. Plofsky,
419 South Central Ave., Chicago 44, Ill.,
MA 6-7786

Doan C. Ryle,
416 Bryn Mawr Ave., Roselle, Ill., LA 9-1232

Samuel W. Winters,
233 Shady Glenn Rd., Walnut Creek, Calif.,
YE 4-9288

Howard M. Finn,
Canoga Park, Calif., DIamond 8-1075

CURTISS-WRIGHT CORPORATION

PRINCETON DIVISION • **PRINCETON, N. J.**

NOW READY
the second printing of

Tables of the Non-Central t-Distribution

GEORGE J. RESNIKOFF AND GERALD J. LIEBERMAN. This book contains the density function, cumulative distribution function and percentage points of the Non-Central t-Distribution, *including their applications to problems in quality control and industrial statistics.* These tables are especially useful for designing sampling inspection plans by variables. A detailed step-by-step description for the design of such plans is included. They are also useful for obtaining one-sided statistical tolerance limits as well as confidence intervals for proportions from a normal distribution.

$12.50

Order from your bookstore

STANFORD UNIVERSITY PRESS

DO YOU HAVE A QUALITY CONTROL PRESENTATION PROBLEM?

QUALITY CONTROL AIDS ARE THE ANSWER

Make your presentation more forceful and understandable by the use of these aids.

QUINCUNX
... This device permits your audience to visualize the creation of a normal distribution pattern as well as the results of variables sampling. All beads are self-contained; nothing to drop out. Done in attractive mahogany complete with zipper carrying case.

ATTRIBUTE SAMPLING DEMONSTRATOR
... Complete unit consists of transparent plastic container, opaque colored beads, and wood paddles permitting easy identification of beads at a distance.

SIMULTATORS
... To demonstrate control chart plotting and shift of distribution pattern.

Lightning Calculator Co.
Box 6192
St. Petersburg Beach 6, Fla.

The NEW Series BH100

MILLI-V-METER®

THE INSTRUMENT with the TAPE-SLIDEWIRE

1/10 THE SIZE...
10 TIMES THE ACCURACY
OF STANDARD INSTRUMENTS!

- *Resolution: 1 part in 10,000*
- **LABORATORY PRECISION for the operating plant.**
- **COMPATIBLE with any transducer—AC or DC.**
- **For strain gage, linear differential transformer, thermocouple, thermistor, resistance thermometer, pulse or variable frequency circuits or systems.**
- **Parabolic or logarithmic functions are linearized for direct digital reading.**
- **Every scale unit is a calibrated value.**

Produced by the makers of the JETCAL® *jet engine Analyzer... in worldwide military and airline use!*

* TRADE MARK

Full information is available for the asking!

B & H INSTRUMENT CO., INC.
3479 West Vickery Blvd., Fort Worth 7, Texas

Sales-Engineering Offices:
ATLANTA, GA., COMPTON, CAL., DAYTON, OHIO, VALLEY STREAM, L.I., N.Y., WICHITA, KAN.
TORONTO, ONT. *(George Kelk Ltd.),* MITCHAM, SURREY, ENGLAND *(Bryans Aeroquipment Ltd.)*

ANNUAL REPORT
of the
BOARD OF DIRECTORS
American Society for Quality Control, Inc.

The Board of Directors of the American Society for Quality Control, Inc., submits herewith its Annual Report covering the fiscal year beginning July 1, 1958 and ending June 30, 1959. This Report summarizes the outstanding events of the year and the more important actions taken by the Board and its Executive Committee.

BOARD OF DIRECTORS

The first meeting of the Board was held on May 27, 1958 at the Hotel Statler, Boston, Massachusetts. The principal purpose of this meeting was the election of five Executive Directors to serve with the President and the Junior Past President as the Executive Committee. Those elected were:

David G. Browne
Rocco L. Fiaschetti
Gerald J. Lieberman
August B. Mundel
Warren R. Purcell

The mid-year meeting of the Board of Directors was held on November 15, 1958 at the Plankinton House, Milwaukee, Wisconsin. The 1958-59 Board held its final meeting on May 28, 1959 at the Hotel Sheraton-Cleveland, Cleveland, Ohio. Acting for the Board, the Executive Committee met on May 29, 1958 in Boston, September 12, 1958 in New York and February 5, 1959 in New York. At each of these meetings the Officers of the Society were present to take part in the reviews and discussions of Society affairs.

In the continuing effort to render improved services to the membership through Society-sponsored activities, the Board and the Executive Committee approved and implemented plans in the areas of Publications, Technical Committees, Professional Development, and Education and Training.

TECHNOMETRICS—A NEW JOURNAL

Of outstanding significance, in this connection, was the work leading to the publication jointly with the American Statistical Association of a new journal, *Technometrics*, a quarterly devoted to statistics in the physical and engineering sciences. The Board expresses its appreciation for the efforts of the Chemical Division in stimulating this project, to those who worked so ardently to assure its reality, and to the Management Committee, the Editor and his associates for their continuing contribution and direction to the journal. Especially does the Board thank the American Statistical Association for the cooperative spirit, helpfulness and substantial contribution of many of its members in connection with this publication.

Further in the area of Publications, the Society accepted sponsorship of three new American Standards, the former War Standards Z1.1, Z1.2 and Z1.3, now bearing ASQC designations B1, B2 and B3. Copies of these Standards are now available from the Society's office in Milwaukee. Also, the Bibliography of the International Statistical Institute has been made available to all members of ASQC at a substantial saving.

Progress was made in increasing the value of the Society's journal, *Industrial Quality Control*, to the member. A new cover design has made it more attractive in appearance, increased advertising has provided direct benefits to the reader, and the technical content reflects the recent effort to provide useful information to all members of the Society and to contribute substantially to the fund of knowledge of the science of Quality Control.

The General Technical Council, formed last year, has given evidence of increased stature in the efforts to effect soundness and unity of the Society's technical programs. Steps were taken looking toward the formation of three new Technical Committees in the areas of Inspection, Research and Development, and Reliability. It is expected that these new groups will become important additions to the technical effort and will serve effectively in their respective areas.

COMMITTEE ON PROFESSIONAL DEVELOPMENT

The Committee on Professional Development completed the work assigned to it as an *ad hoc* committee and issued its Final Report in February, 1959. This Report recommended the implementation of a six-point program in the area of professional development, each phase to be carried on by a committee appointed for the specific program charted, and that integration of the entire activity be effected through a General Professional Council. Work progressed toward the establishment of these several committees and the entire Council. In the area of public service, one of the six phases of the program recommended, the Society has taken one significant step through affiliation with the American Standards Association as an Associate Member.

The Board of Directors took a number of other steps to initiate new services and improve existing ones for the members of the Society. In the area of Education and Training, the Society sponsored a Management Workshop Seminar in Cleveland just prior to the Convention. Under the direction of a competent staff, the Seminar was judged to be eminently successful and plans have been made for further such programs in the coming year. Another service is the Group Insurance Program, providing opportunity for members to benefit from major medical and loss of time plans at favorable group premium rates. Future convention sites were selected, with Cincinnati chosen for 1962 and Chicago for 1963. Further, a Mid-Pacific Quality Control Conference at Honolulu, Hawaii, was approved as a post-convention activity for the 1960 Convention at San Francisco.

A number of significant improvements in our business operations were put into effect, and others resulting from current studies are expected to result in still further improvements and in reductions in operating costs. Essentially all Sections are now on a central collection of dues basis, which has been helpful in reducing costs, providing better information to Sections and better service to members.

A special committee studying a number of facets of our organizational and functional structure completed its work and final recommendations were submitted at the May 28 meeting of the Board of Directors. It is expected that such recommendations will form the basis of further studies looking toward revisions of the governmental and operational structure of the Society to improve further its effectiveness for the overall benefits of the member.

The Society continued its growth pattern, and along with this expansion, a favorable balance of income over expenses in each of its several operations was achieved this year. The Treasurer's Report, submitted as a part of this Annual Report of the Society, gives evidence of the balance maintained in the income and expense areas.

ACKNOWLEDGEMENT

The Board of Directors acknowledges, with gratitude, the splendid contributions made by the Officers in the many Society programs initiated and carried forward during the year. The Board also thanks the Officers and members of the Divisions, the Technical, Professional and Service Committees, and the several special committees for their effort in furthering their programs and activities. Especial thanks go to the Chairman of the Editorial Board and to the members of that Board for their very important contribution to the Society and to its journal, *Industrial Quality Control*.

The Board expresses its appreciation for the work of its own representatives, the Executive Directors, for the guidance they have given to Society affairs. It also appreciates the effort of the many Section officers and members in their untiring work in behalf of the Society; the Board expresses the view that these efforts have contributed importantly to the gains that have been made during the year.

The Board of Directors is also grateful to the Society's headquarters staff, under the direction of the Administrative Secretary, for the continued efficient conduct of its many operations and for the splendid "esprit de corps" that has developed among its members.

As a result of the fine efforts of the many individuals in all groups within the Society, this year may be counted as one manifesting a measure of progress toward the stated objectives, with every prospect that the present programs will be carried forward with enthusiasm, thus assuring even greater gains for the Society and increased benefits for its members in the year ahead.

New York, New York
June 30, 1959

For the Board of Directors
C. Eugene Fisher, Chairman

Appendix A: Report of the Executive Secretary

Membership

Membership in ASQC continues its steady annual growth since the formation of the Society in 1946. As of June 30, 1959, it reached a new high of 11,310 (See Exhibit A). The net gain over June 30, 1958 is 247 or 319 under the net gain shown for the last year. Following is a membership breakdown as of June 30, 1959:

Associate Member	436	Renewals	8,800
		New Members	2,510
Member	8,650		
Senior Member	2,016	Total	11,310
Fellow	207		
Total	11,310		
Enrolled Students	47		

The complete June 30, 1959 membership report by districts and sections is attached as exhibit B.

Since the last annual report the following new sections were admitted:

Section	Charter No.
Joplin (Missouri)	106
St. Petersburg-Tampa (Florida)	107
Orlando-Cape Canaveral (Florida)	108
Northeast Tennessee (Tennessee)	109
Akron-Canton (Ohio)	110

By actual count there are 107 active sections, although 110 have been chartered. Mortality and amalgamation over the years accounts for the difference.

Exhibit C is a graphic presentation of columns 5 and 6 of Exhibit A, showing the section and membership growth of the Society.

The Michigan section changed its name to Greater Detroit during the year to comply with ASQC policy for section names.

A new district was created in the past year by splitting District 16 into two districts, 16 and 17. The sections remaining in District 16 are Los Angeles, San Bernardino, San Diego, Tucson, and Phoenix. Those in the new District 17 are Japan, Portland, Salt Lake City, San Francisco, Seattle and Sacramento. This was done because of the rapid growth in ASQC population on the West Coast and because geographically the District was to unwieldly.

Exhibit A—Record of Membership Growth

Date	Members	Percent Renewals	Net Gain	Percent Gain	New Members	Active Sections	Members Rec'd for Following Fiscal Year
June 30, 1947	1,926				1926	25	*
June 30, 1948	2,102	*	176	9.1	*	31	*
June 30, 1949	2,638	75.2	536	25.5	1058	35	*
June 30, 1950	3,510	76.7	872	33.1	1489	42	58
June 30, 1951	4,245	80.5	735	20.9	1422	48	167
June 30, 1952	6,109	81.2	1864	44.0	2689	60	207
June 30, 1953	7,430	75.0	1321	21.6	2846	71	146
June 30, 1954	8,548	77.5	1118	15.1	2798	80	254
June 30, 1955	8,780	74.7	232	2.7	2399	86	177
June 30, 1956	9,673	78.6	891	10.3	2781	92	184
June 30, 1957	10,497	78.3	824	8.5	2924	97	174
June 30, 1958	11,063	79.2	566	5.4	2751	102	207
June 30, 1959	11,310	79.6	247	2.2	2510	107	169

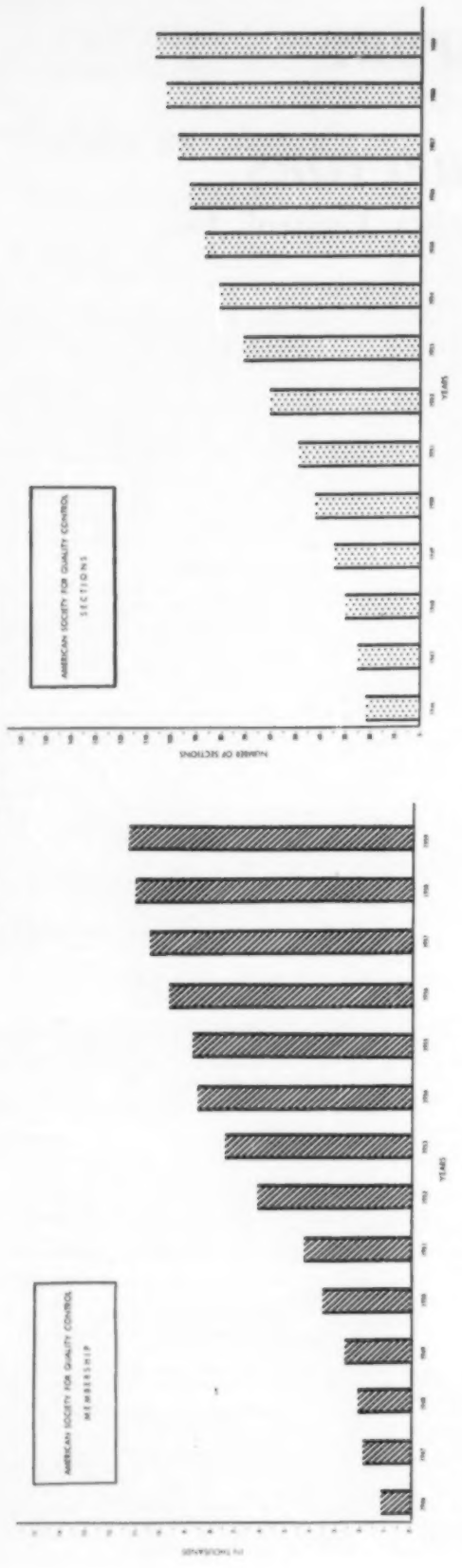
*No Record

Exhibit B—Membership Report, 1958-59

	Membership June 30, 1958 Total	F*	Membership June 30, 1959 S*	M*	A*	Total
District 1						
Boston	258	9	54	249	24	336
Buzzards Bay	27		1	24		25
Hartford	138	2	25	110	2	139
New Hampshire	37		11	29		40
New Haven	78	1	23	46	1	71
Pittsfield	65		1	101	1	103
Rhode Island	68	3	12	52		67
Southern Connecticut	152	1	36	98	3	138
Western Massachusetts	65	3	13	43		59
Worcester	68	2	15	46		63
Total	956	21	191	798	31	1041
District 2						
Albany	88	3	15	67	1	86
Buffalo	96	2	25	74	2	103
Corning-Elmira	114		11	80		91
Mid-Hudson	105	2	33	90	1	126
Rochester	143	7	59	81		147
Binghamton	133		16	100		116
Syracuse	125	5	29	88		122
Utica	36		5	44		49
Total	840	19	193	624	4	840
District 3						
Metropolitan	784	29	152	626	11	818
District 4						
Hamilton	52	3	6	47		56
Montreal	184	3	19	175		197
Toronto	128	2	21	110		133
Western Ontario	40		3	39	2	44
Windsor	78		8	61		69
St. Catharines	19		1	13	4	18
Total	511	8	58	445	6	517
District 5						
Allentown-Bethlehem	99	1	11	100	5	117
Danville-Sunbury	66	1	1	30		32
Erie	42		5	35	4	44
Harrisburg	133		14	94	4	112
Lansdale	55	2	7	38		47
Philadelphia	301	5	63	215	2	285
Pittsburgh	143	6	39	96	1	142
Scranton-Wilkes Barre	42		6	33	1	40
Trenton	35		8	24		32
Total	916	15	154	669	17	855
District 6						
Baltimore	142	4	19	107	1	131
Piedmont	68		11	65	1	77
Delaware	80	4	18	52		74
Richmond, Va.	52	2	9	35	2	48
Washington	107	5	26	91		122
Cumberland	43		5	34		39
Total	492	15	88	384	4	491
District 7						
Cleveland	321	9	63	171		243

*Fellow, Senior, Member, Associate Member.

Exhibit C—Membership and Section Growth



District 8						
Cincinnati	265	3	25	145	16	189
Columbus	121	1	11	86	6	104
Dayton	114	1	10	80		91
Parkersburg	24		1	31	3	35
Toledo	85	1	8	63	1	73
Youngstown	62	1	3	44		48
Charleston	81		14	59		73
Hamilton-Middletown	87		10	55	4	69
Lima	90		12	42	19	73
Lexington, Ky.	57			52	1	53
Akron-Canton			19	91	18	128
Total	986	7	113	748	68	936
District 9						
Evansville-Owensboro	53	1	7	45	2	55
Grand Rapids	33	1	6	19		26
Greater Muskegon	55		10	35	1	46
Indianapolis	199	7	33	127	5	172
Muncie	31	1	10	15	2	28
N. E. Indiana	52		8	40		48
So. Bend-Mishawaka	132		10	77		87
Richmond, Ind.	62		4	13	16	33
Battle Creek- Kal.	54	2	7	41		50
Total	671	12	95	412	26	545
District 10						
Greater Detroit	496	11	90	333	64	498
District 11						
Chicago	495	14	90	326	83	515
District 12						
Central Illinois	43	1	17	18		36
Iowa	156	7	36	76		119
Milwaukee	226	2	60	138	2	202
Minnesota	209	1	31	180	3	215
Racine	41		11	23	1	35
Rockford	49	1	11	135		48
Winnebago	58	1	9	47	2	59
Kankakee-Joliet	44		9	37		46
St. Charles	53		6	56	2	64
Total	879	13	190	610	11	824
District 13						
Denver	50	1	5	39		45
Kansas City	93		22	66		88
Omaha-Lincoln	42	1	5	39		45
St. Louis	170	7	42	84	12	145
Wichita	110		14	70	2	86
Tulsa	9		4	72	24	100
Joplin	40		2	26		28
Total	523	9	94	396	38	537
District 14						
Albuquerque	129		22	119		141
Baton Rouge-N.O.	21		2	15		17
Dallas-Ft. Worth	170	1	38	163	3	205
Mexico City	50	1	4	51		56
San Antonio	33		12	25		37
South Texas	92	2	14	77	4	97
Waco	30		3	37	1	41
Total	525	4	95	487	8	584
District 15						
Birmingham	25		2	26		28
Chattanooga	27		5	25	1	31
Georgia	60	2	13	39	1	55
Huntsville	31		5	37	1	43
Louisville	97		12	72		84
Memphis	39		10	28		38
Tennessee	34	1	10	21		32
Pensacola-Mobile	9		1	60		61
St. Petersburg-Tampa			2	63	36	101
Orlando-Cape Canaveral	9		10	45	2	57
N. E. Tennessee	15		10	35	1	46
Total	348	3	80	451	42	576
District 16						
Los Angeles	413	10	95	308	4	417
San Bernardino	83	1	18	117	1	137
San Diego	131		47	114	3	164
Tucson	37		2	32		34
Phoenix	61		13	50		63
Total	725	11	175	621	8	815
District 17						
Japan	76		12	58		70
Portland	46		12	38		50
Salt Lake City	35	1	7	34	1	43
San Francisco	215	6	35	192	6	239
Seattle	85		11	72		83
Sacramento	38		6	56		62
Total	495	7	83	450	7	547
International	100	1	12	99	6	118
Enrolled Students	71					47
GRAND TOTALS	11,063	208	2016	8650	436	11,310

Headquarters Office

Your headquarters has continued improving its communications with members and the sections. The Handbook for Section Officers was revised and distributed in this past year. Also distributed this year was the new manual for section examining committees fulfilling a vital requirement in our professional activity.

"ASQC Intercom" has proved a valuable communications tool between headquarters, and the section and division officers. It has been an instrument to distribute information on section programs, speaker lists, membership reports, the reporting of membership contests such as "Operation Bootstrap" and ""Let's Go-Let's Grow." It has enabled more people to understand Society and headquarters procedures in all levels of activity.

A new periodical news letter, "DR-Bulletin" was established to improve the communications between the headquarters office and the District Representatives. This new bulletin service encourages the District Representatives to work more closely with their sections and make monthly contacts to report the various section membership standings.

After much study your headquarters office staff has again shortened the time lag for reporting new members and address changes to the section secretaries, as well as providing the section treasurers with monthly reports and section allotment checks. This program will become extremely important next fall when the renewal membership reports will be sent to the section secretaries each week so that they may keep their records current.

An important new service was offered to members this year, the ASQC Group Insurance Program which allows members and their families to subscribe to their choice of a loss of time plan, a major hospital-nurse-surgical expense plan, and for older members and their wives, the senior hospital-nurse-surgical expense plan. In addition your headquarters office is a business center for the new joint ASQC-ASA publication *Technometrics* as well as the distribution center for the International Statistical Institute's *International Journal of Abstracts on Statistical Methods in Industry*. The Addressograph plates for both publications are produced at your headquarters office and the subscription file is maintained there.

We again wish to thank the great majority of sections for cooperating with the society on direct collection of dues by the headquarters office. Their participation has enabled the Society to utilize the most economical procedures in processing the renewals and new members. Currently only five domestic sections, (including Canada) are not participating. It is our sincere wish that next year these remaining sections will adjust their dues structure and/or their procedures to permit direct collection. During the coming year we propose to furnish all participating sections with lists of their non-renewing members in September (non-renewed as of August 24) and again in November (as of October 31). This is in addition to the complete membership list of June 30 which the sections have been receiving in July. With this information their membership committees can then contact the members who have not renewed and aid in increasing their renewal rate.

Your Executive Secretary and your headquarters staff look forward to co-operating with you again in the next year and want to take this opportunity to thank all section and division officers, individual members, and officers and directors of the Society for their comments and suggestions for improving Society service to every member and to the profession.

Milwaukee, Wis.
June 30, 1959

L. S. EICHELBERGER
Executive Secretary

Appendix B: Report of the Treasurer

During the 1958-59 fiscal year additional progress was made in the refinement of your Society's accounting and bookeeping procedures. Upon the recommendation of our Auditing Committee, a Financial Procedures Manual is being written. Subject manual is to cover the bookkeeping procedures employed by the Society, both in the day-to-day bookkeeping and on the summarization of accounts to form the annual financial report.

Financial Procedures Manual

The Annual Report and Budget Preparation sections of subject manual are nearing completion, and the balance of the manual is expected to be completed during the ensuing year. The manual is being prepared to insure use of accepted accounting procedures for an organization of our type, to insure consistency in accounting practices from year to year, to facilitate the annual audit, and to readily familiarize the officers and Board of Directors of the Society and other interested parties with our accounting procedures. Also, the growing magnitude and complexity of the Society's financial transactions make a manual of procedures a must.

Direct Collection of Dues

The direct collection of dues system coupled with a more frequent and improved system for reporting membership renewals are designed to provide better service to sections, to permit expedient follow-up on non-renewals, and to improve efficiency and accuracy of our accounting, auditing and budgeting controls.

Monthly Financial Report

At the beginning of each fiscal year, a budget is prepared and approved by the Executive Committee of your Society. A monthly Financial Report is prepared by the Milwaukee office which shows for each budget item, activity vs. budget for the month, year-to-date activity vs. budget, and percent variance year-to-date vs. budget. This budget performance report provides the information required to control expenditures and to ascertain our financial position on a month-to-month and year-to-date basis. Already the report has proven valuable, not only as a means of fiscal control, but also in providing historical data for budget preparation.

Annual Reports

The operations for the year are presented in the attached exhibits —Exhibit D, Comparative Balance Sheets; Exhibit E, Statement of Changes in Net Worth and Reserves; Exhibit F, Statement of Income and Expenses; Exhibit G, Statement of Income and Expenses, Award Funds. Exhibit H presents graphically the per capita income and

Exhibit D—Comparative Balance Sheets
June 30, 1959 and June 30, 1958

ASSETS

	1959		1958	
Current Assets				
Office cash funds		$ 558.90		$ 577.67
Demand deposits:				
General operations	$20,794.14		$19,541.62	
Convention operations	8,467.63		14,949.73	
Securities operations	1,966.08	31,227.85	1,128.72	35,620.07
Time deposits:				
General operations	$11,601.88		$ 1,089.09	
Brumbaugh Award Fund	2,198.78		2,186.42	
Shewhart Medal Fund	653.02		813.58	
Saddoris Award Fund	31.84	14,485.52	30.92	4,120.01
Accounts receivable:				
General operations	$ 3,377.58		$ 1,760.38	
Convention operations	180.61	3,558.19	232.85	1,993.23
Interest accrued on securities		400.32		348.53
Inventories at nominal amounts:				
Back issues and publications	$ 1.00		$ 1.00	
Stationery and supplies	1.00	2.00	1.00	2.00
TOTAL CURRENT ASSETS		$ 50,232.78		$ 42,661.51
Securities—at cost (quoted market value 1959—$122,328.01; 1958—$95,692.71)				
Fixed Income:				
United States Treasury bonds	$20,186.48		$18,372.04	
Other bonds	29,313.84		22,722.45	
Preferred stocks	5,704.05		11,796.37	
	$55,204.37		$52,890.86	
Equities	43,872.21	99,076.58	39,694.42	92,585.28
Furniture and Equipment—at nominal amount		1.00		1.00
Deferred Charges				
General operations	$ 3,744.19		$ 2,824.79	
Convention operations		3,744.19	500.00	3,324.79
		$153,054.55		$138,572.58

LIABILITIES

	1959		1958	
Current Liabilities				
Accounts payable:				
General operations	$ 7,989.72		$ 5,891.47	
Convention operations	1,774.26	$ 9,763.98	4,732.11	$ 10,623.58
Accrued salaries		265.63		374.35
Pay roll taxes and taxes withheld from employees		979.58		726.17
Sections allotment		8,008.00		6,342.00
Divisions dues		1,095.00		778.00
Excise taxes—prior years		1,012.36		
TOTAL CURRENT LIABILITIES		$ 21,124.54		$ 18,844.10
Deferred Income				
Dues collected in advance	$26,511.50		$20,644.00	
Less Sections allotment transferred to current liabilities	8,008.00		6,342.00	
	$18,503.50		$14,302.00	
Library subscriptions unearned	6,310.00		6,400.00	
Exhibit space rental unearned	340.00	25,153.50	340.00	21,042.00
Reserves				
For possible losses on securities	$ 5,000.00		$ 5,000.00	
Brumbaugh Award Fund	2,198.78		2,186.42	
Shewart Medal Fund	653.02		813.58	
Saddoris Award Fund	31.84	7,883.64	30.92	8,030.92
Net Worth		$ 98,892.87		$ 90,655.56
		$153,054.55		$138,572.58

Exhibit E—Statement of Changes in Reserves and Net Worth, Year Ended June 30, 1959

	Net Worth				Reserves			
	General Operations	Convention Operations	Securities Operations	Total	For Possible Losses on Securities	Brumbaugh Award Fund	Shewhart Medal Fund	Saddoris Award Fund
Balance at July 1, 1958	($9,017.44)	$10,610.47	$89,062.53	$ 90,655.56	$5,000.00	$2,186.42	$813.58	$30.92
Add:								
Excess of income over expense	2,783.35	2,423.51	3,030.45	8,237.31		12.36		.92
Transfer from Convention Operations	2,150.00		4,350.00	6,500.00				
	($4,084.09)	$13,033.98	$96,442.98	$105,392.87	$5,000.00	$2,198.78	$813.58	$31.84
Deduct:								
Excess of expense over income							$160.56	
Transfer to General Operations		$ 2,150.00		$ 2,150.00				
Transfer to Securities Operations		4,350.00		4,350.00				
		$ 6,500.00		$ 6,500.00			$160.56	
BALANCE AT JUNE 30, 1959	($4,084.09)	$ 6,533 98	$96,442.98	$ 98,892.87	$5,000.00	$2,198.78	$653.02	$31.84

( ) Indicates deficiency in assets.

INDUSTRIAL QUALITY CONTROL

and Expenses; Exhibit G, Statement of Income and Expenses, Award Funds. Exhibit H presents graphically the per capita income and expenses reported in Exhibit F.

Because it is impractical to conduct an independent audit of division funds, these are not included in the above exhibits. However, the assets of the various divisions as reported by the respective auditing committees June 30, 1959 are as follows: Administrative Applications, $2,437.21; Aircraft and Missile, $2,228.07; Automotive, $1,223.02; Chemical, $9,725.14; Electronics, $807.17; Textile, $2,138.80.

San Francisco, Calif.
June 30, 1959

ALLAN M. HULL
Treasurer

Exhibit F—Statement of Income and Expense
Year Ended June 30, 1959

General Operations:		
Income:		
Membership dues	$92,957.00	
Publications	57,722.75	
Services	4,506.33	
Workshop seminar	6,900.00	
Miscellaneous	971.18	$163,057.26
Operating expenses:		
Publications:		
Printing, mailing, and engraving costs—magazine	$48,683.68	
Printing costs—other	4,788.89	
Salaries	20,600.96	
Advertising	7,724.09	
Administrative and sundry	3,298.75	
	$85,096.37	
Workshop seminar expenses	$ 4,509.79	
Executive group expenses	$ 1,460.73	
Executive secretary:		
Salaries	$31,065.80	
Pay roll taxes	1,005.76	
Records and services	6,624.13	
Rent and light	3,891.80	
Travel	2,959.89	
Equipment and equipment maintenance	651.20	
Printing	5,729.21	
Administrative and sundry	6,001.32	
	$57,929.11	
Treasurer:		
Salaries	$ 5,832.16	
Legal and other professional	1,225.00	
Insurance	765.02	
Sundry	298.06	
	$ 8,120.24	157,116.24
EXCESS OF INCOME OVER OPERATING EXPENSE—GENERAL OPERATIONS		$ 5,941.02
Special expenses authorized by Executive Committee:		
Purchase of major equipment	$ 1,645.31	
Excise taxes—prior years	1,512.36	3,157.67
EXCESS OF INCOME OVER TOTAL EXPENSE—GENERAL OPERATIONS		$ 2,783.35
Convention Operations:		
Income:		
Registration fees	$31,775.50	
Exhibit booth sales	8,020.00	
Transactions sales	1,631.20	
Miscellaneous	2,655.95	$ 44,082.65
Expense:		
Luncheons and banquets	$16,576.37	
Publicity and promotion	4,253.09	
Technical program	4,896.15	
Exhibit expense	6,788.70	
Transactions	4,732.79	
Social program	2,717.03	
Miscellaneous	1,695.01	41,659.14
EXCESS OF INCOME OVER EXPENSE—CONVENTION OPERATIONS		$ 2,423.51
Securities Operations:		
Income:		
Interest earned	$ 1,560.94	
Dividends received	2,219.06	$ 3,780.00
Expense:		
Loss on sale of securities	$ 18.89	
Legal and other professional	225.00	
Investment advisory service	505.66	749.55
EXCESS OF INCOME OVER EXPENSE—SECURITIES OPERATIONS		$ 3,030.45
EXCESS OF INCOME OVER EXPENSE—COMBINED OPERATIONS		$ 8,237.31

Exhibit H—Income and Expenses

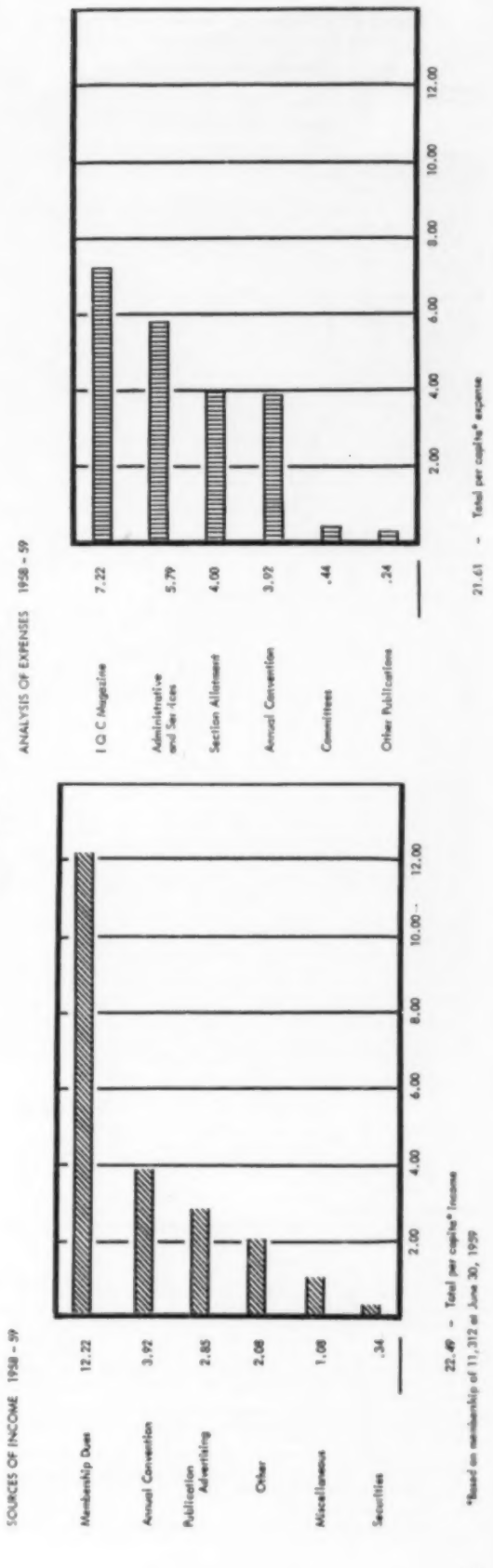


Exhibit G—Statement of Income and Expense—Award Funds, Year Ended June 30, 1959

Brumbaugh Award Fund

Income—interest earned	$ 66.08
Expense (including $50.00 cash award to Joseph M. Juran)	53.72
EXCESS OF INCOME OVER EXPENSE	$ 12.36

Shewhart Medal Fund

Income—interest earned	$ 24.58
Expense—cost of medals	185.14
EXCESS OF EXPENSE OVER INCOME	$160.56

Saddoris Award Fund

Income—interest earned	$ .92

Accountants' Report

Audit Committee,
American Society for Quality Control, Inc.
Milwaukee, Wisconsin.

We have examined the financial statements of American Society for Quality Control, Inc. for the year ended June 30, 1959. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet and statements of income and expense and changes in reserves and net worth present fairly the financial position of American Society for Quality Control, Inc. at June 30, 1959, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Milwaukee, Wisconsin,
July 30, 1959.

Ernst & Ernst
Certified Public Accountants

Certification of Auditing Committee

Ernst & Ernst, Certified Public Accountants, were retained to audit the books of the American Society for Quality Control, Inc. Relying on this audit and the certification of Ernst & Ernst, we are of the opinion that the accompanying Balance Sheets, Statements of Income and Expense, and Changes in Reserves and Net Worth fairly present the financial position of the Society as of June 30, 1959, and its financial transactions for the fiscal year ending that date.

Auditing Committee

Howard R. Bolton
Walter W. Merrill
Blair Olmstead
Paul A. Robert
George Thompson
G. Rupert Gause, *Chairman*

Report of the Editorial Board

Purpose of the Board

It is the function of the Editorial Board to have operating supervision of *Industrial Quality Control* and all other technical publications of the Society.

Data on Volume XV

These 12 issues consisted of 532 pages plus 48 cover pages, plus an 8-page Index to Vol. XV bound with the June issue. Of the 532 pages available for editorial copy, 416, or about 78% were used for this purpose, the remaining 22% for paid advertising. Of the 48 cover pages, 34 were for paid ads, 12 for front covers, 1 for ASQC publicity, 1 unused.

In these 12 issues a total of 48 contributed papers were published, averaging 4.1 pages per paper and ranging from a little under 1.25 to 8.75 pages in length. Percentagewise these 416 pages were distributed as follows:

	Vol. XV
Contributed Papers	47.9%
Section, Division, Personal News Items	18.8%
Departmental Copy	11.3%
Miscellaneous (Masthead and Contents pages, Editorials, ASQC Convention and other Publicity, Stock Lists, Annual Reports)	22.0%
	100. %

Contributed papers can be classified as follows:

General Applications of SQC Methods	7
Special Applications of SQC Methods	16
General Interest	12
Technical	13

General Publications

No contributions to this series were recommended for publication during Vol. XV.

Reprints for ASQC Stock List

A second printing of the Span Plan General Publications No. 3 was completed and announced in the November 1958 issue.

A second printing of the "Fundamentals of Analysis of Variance", by Charles R. Hicks, originally published in the Aug., Sept., Oct. 1956 issues of IQC, was completed and announced in the January issue.

"Sampling in a Nutshell", by Morris J. Slonim, initially published in the Journal of the American Statistical Association, was reprinted by permission as a separate pamphlet and added to the ASQC Stock List in November.

The paper "Who Controls Quality—and How?", by Warren R. Purcell, published in the October issue, was reprinted and added to the ASQC Stock List in January.

New Cover Design

The new cover design, as endorsed by the Editorial Board, made its first appearance with the January issue.

Three new Features in IQC

1. Beginning with the July (No. 1) issue of Vol XV, a new service, both to advertisers and to readers, was begun and has been regularly continued in each issue since, under the caption of "Product Education Service". This section lists current and previous advertisers and provides a response form, keyed to this information and to the "What's New?" items reported, which a reader can use to make inquiries to our advertisers.
2. Begun in the September issue and continued since, a section captioned "ASQC Announces", regularly reports the name and city of new members and advancements to the Senior Grade of former Members within ASQC as of record in the Milwaukee Office for each 30 day period two months prior to the issue carrying these names.
3. Although elections to the Fellow Grade have always been published in IQC as reported by the Examining Committee, the March issue began a practice (which will be continued) of giving more attention to this important change in membership status by featuring it under the caption "ASQC Honors" and providing (when available) a brief biography and picture of the new Fellows.

Bibliography Department Discontinued

During the first five and one-half volumes of IQC, sporadic attempts were made from time to time by the editorial office to provide bibliography listings. Beginning in the January 1950 issue, a regular Bibliography Department was begun under the editorship of Joseph Movshin, St. Louis Section. The work of channeling listings through the department editor to IQC was done by a group of Associate Editors, most of whom were active in the St. Louis Section.

In the 84 issues of IQC (Jan. 1950-July, 1959 inclusive) published since this department first appeared, 53 issues have carried a total of 1277 titles reported by its editor and his associates. The department became inactive during Vol. XIV because it was believed that the service it was attempting to render could be more effectively handled through an agency devoted primarily to the bibliography field. Several such possibilities were under investigation by a Bibliography Committee acting at the Society level.

Arrangements between ASQC and the International Statistical Institute were finally completed which make available to ASQC members a subscription at a discount to the International Journal of Abstracts on Statistical Methods in Industry, and this liason was officially announced in the February 1959 issue of IQC.

The Editorial Board takes this occasion to pay tribute and extend its appreciation to Joseph Movshin and his Associate Editors in the St. Louis Section for the fine and faithful and significant service rendered our journal during the period January 1950-August 1957 in the maintenance of a bibliography department in IQC.

Editorial Board Changes

The following persons have accepted appointment to the Editorial Board for a five-year term beginning July 1, 1959:

Frank E. Grubbs, Aberdeen Proving Ground
Gayle W. McElrath, University of Minnesota
Irving W. Burr, Purdue University

The three men retiring from the Board as of June 30, 1959 are:

Allen T. Craig, State University of Iowa
Charles A. Bicking, the Carborundum Co.
B. H. Lloyd, Price Waterhouse & Co.

Acknowledgement

Grateful acknowledgement is due the following persons for editorial assistance in reviewing submitted manuscripts in cooperation with the Editorial Board:

Paul C. Clifford
Acheson J. Duncan
Leroy Folks
Richard A. Freund
Frank Gryna
Ralph D. Humphries
Joseph M. Juran
Gayle W. McElrath
August B. Mundel
Edwin G. Olds
Paul S. Olmstead
Ellis R. Ott
William R. Pabst, Jr.
Warren R. Purcell
Roger I. Wilkinson
A. W. Wortham

The Editorial Board and the Society also acknowledge appreciation to the following Department Editors who are serving our Journal so faithfully in the maintenance of its departmental activity:

Book Review	W. D. Baten
Section Briefs	Allan Zingelman
Management's Corner	J. M. Juran
Practical Aids	Ellis R. Ott
Problems Department	P. C. Clifford and T. A. Budne
Supervisor's Circle	P. A. Robert
What's New?	R. A. Wylie

For the Editoral Board
Mason E. Wescott
Chairman

6th Western Regional Conference Oct. 23-24

The Sixth Annual Western Regional Conference Oct. 23-24 at the Ramada Inn, 3825 E. Van Buren, Phoenix, Ariz., will be hosted by the Phoenix Valley of the Sun section.

Section chairman Walter Klontz anticipates that 500 ASQC members from throughout the United States will attend the conference.

According to Dan Casky, Sperry Rand, Phoenix, conference chairman, the theme for this year's conference is "Quality Control—Low Cost Management Insurance." Some 25 papers using this theme will be presented during the conference.

The public is invited to attend, particularly those involved in manufacturing or any of the associated industries.

JONES & LAMSON OPTICAL COMPARATORS

the man who needs a new machine tool is already paying for it

Determines lead and spacing errors of less than .0001"

Lead amplification on J & L Comparators combines both optical and mechanical magnification in standard gaging set-up. It produces amplification of any lead error, in threads of all standard forms and pitches.

For example, a .0001" lead error is magnified to .050" or .100" on the screen. Measurements are made direct on the machine's micrometer, with ease and repeatability.

Other demanding applications, such as the extremely precise measurement of critical spacing between the valve ports and the piston lands of hydraulic valves, are also performed with this new amplifier.

The dependability of this attachment was demonstrated in a series of tests conducted on a special application by J & L engineers. Among other things, it was proved beyond doubt that a group of Jo blocks can be measured within .000025". Furthermore, these readings were easily repeated, even by different operators.

The speed, precision, flexibility and dependability of Jones & Lamson Comparators might well make a big difference in *your* operations. Write for Catalog 5700, Jones & Lamson Machine Company, 510 Clinton Street, Springfield, Vermont.

Turret Lathes • Automatic Lathes • Tape Controlled Machines • Thread & Form Grinders • Optical Comparators • Thread Tools

How to Lose At the QC Game

BRAINARD E. SOOY

*Production Manager**
The Wolverine Carton Co.
Grand Rapids, Michigan

Everyone can tell anyone how to win at any game. The world, it seems, has an over-abundance of Monday morning quarterbacks that know all the answers! The Quality Control game, statistical or otherwise, is no exception. Almost everyone can tell us how to win, and if we would take all their free advice we could point with pride to an unending era of victory—if the quality of the advice matched the willingness with which it is given.

However, just in case someone might want to lose instead of win, it appears he would have no place to turn for advice. In order to correct this deplorable situation, I shall seek to give some sound counsel to such a one. If anyone else happens to pick up a constructive idea from these thoughts he is surely welcome.

Now it isn't always easy to lose. One must be equipped with the proper lack of knowledge, a certain firmness of character often described as bull-headedness, and an utter disregard for the laws that govern men's actions and reactions. However, properly armed with these obnoxious tools one can successfully fail in a surprisingly short time.

First, let us look at the economics of the situation. We might consider the Profitless Printing Company as an illustration. Things were going too well for the good old Profitless. Last year the net take after taxes was up to 2½% and so the owners hired George to head up a Quality Control program in a sincere effort to reduce profits and therefore taxes—the ultimate goal of every forward looking company. They couldn't have done better! After a bit of investigation, George found that in the Graphic Arts field a figure of from ½% to 1% of the sales dollar could do a pretty fair job in Quality Control. He therefore worked out a budget that called for a superintendent of Quality Control, three foremen and a pair of blondes for his office. To this he added a double quota of inspectors and an assistant to himself to do all the work. The net result was a budget cost of some 3% of the sales dollar which took care of the former 2½% of net. George was on his way. The moral here is to always start too big—nothing else can induce failure quicker or more completely!

Assuming, however, that George survived his initial success in failure and had to cast around for some other means, he could really come up with a sure fire method when he introduced his program. You see, George was an educated Statistical Quality Control Engineer which means he had just completed a two weeks course at Mousetrap U. Being thus filled with wisdom and spizerinctum he returned to good old Profitless as an expert. No problem too tough for George! So, when he got home he jumped right into the middle (I mean muddle) of things. It took three days to get some charts printed and during this time he acquainted everyone with grand tales of sigmas, control limits, outgoing quality levels and a multitude of other things no one understood. He also assured all the pressmen that the new system was a sure-fire method of catching all their mistakes. Thus endearing himself to everyone, George took his charts and six girl inspectors who had never worked on a printing press before and he was in business—or was he?

We should add a word as to how George chose his inspectors, for unless he had been careful here, success instead of failure might have been achieved in spite of his efforts. There were several ladies of doubtful age and character around the plant that hadn't made good anywhere else so George decided to give them a try. Still being short a couple, he hired a table waitress (brunette and a 6th grade graduate) and a strawberry blonde from parts unknown. Now George wasn't much of a teacher so he decided to forego all but the barest of technical training and concentrate on the psychological end which seemed more important anyway. He emphasized their importance to them and to everyone else. He instructed them to "pour it on" the pressmen and settle for nothing but perfection. He informed them of the power of the positive approach and that the best defense was a good offense. In fairness, he also warned the pressmen of what was coming which further endeared the program to them. Thus armed with beligerence on the part of the girls and animosity on the part

ASQC LCS Codes 310;331:70;80:426;427

*Now Assistant to the President.

Editorial Note

Mr. Sooy was the first person to be honored by an award sponsored by Rochester Institute of Technology given annually to the nominee designated as having made major contributions to Statistical Quality Control in the Graphic Arts field. The award was first made in October 1958, and this paper was presented by Mr. Sooy on that occasion.

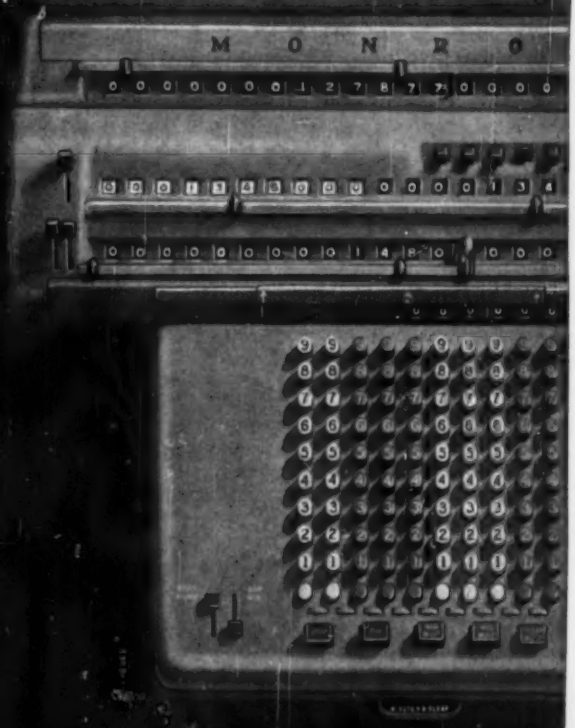
B. E. Sooy has an M.E. degree and has been in the graphic arts industry since 1934. He completed a basic SQC course at the University of Colorado in 1950 and the Advanced SQC course at Purdue University in 1951. He was Chief of Quality Control at the Gardner Board and Carton Company when he left there in 1954 to become Production Manager at the Wolverine Carton Company where he is now currently Assistant to the President.

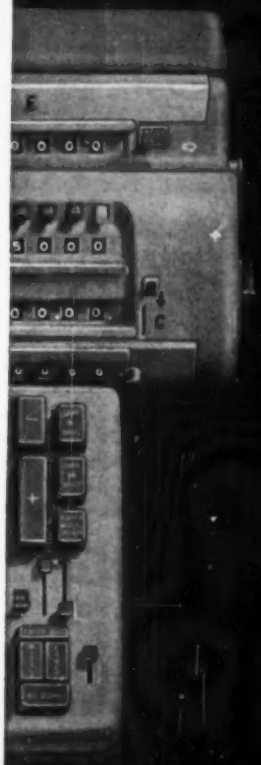
Ted has been very active in promoting effective SQC programs in his field, both operationally within the companies where he has worked, and as a lecturer on numerous programs sponsoring SQC for the Graphic Arts Industry in this country and in Europe. He is a staunch and able exponent of the basic axiom that "quality control is people".

For the sophisticate in figures...

a Monroe that will do everything other Calculators do,

plus:





1. **Automatic Decimals:** you set all numbers . . . add, multiply, subtract or divide automatically around a single decimal point.

2. **Multi-factor Multiplication:** return the transfer slide and the last product becomes the next multiplier.

3. **"Memory Dials" Accumulation:** products are accumulated automatically in the "Memory Dials" while the results of individual problems appear in another dial. Quotients can be accumulated in one dial while individual quotients appear in another.

4. **Selective Division:** you can divide directly into the "Memory Dials" for super-fast averages or the determination of Standard Deviation.

5. **Automatic Carriage Positioning:** following a multiplication, the carriage automatically positions itself, decimally correct for addition or subtraction.

These features make the 88N the world's most advanced calculator.

For more information on Monroe and statistics, call your Man from Monroe today.

See the MAN from MONROE

A DIVISION OF LITTON INDUSTRIES

for CALCULATING
ADDING · ACCOUNTING
DATA PROCESSING MACHINES

Monroe Calculating Machine Company, Inc., Sales and service in principal cities everywhere. General offices, Orange, N. J.

of the pressroom gang, George sailed in—for a short time. This whole introductory program is known as the "sudden death" policy. If the pressroom gang hadn't finished George off, the management would have!

George's control charts were interesting documents. As mentioned above, George was an educated engineer with a vast knowledge to demonstrate to an ignorant and unwilling group of employees. Nothing like a control chart as the perfect medium for this! George's abounded in sigmas, $\bar{X}$, R, C, NP' and the formula for the standard deviation. His crowning achievement was the formula for the normal curve located in the lower left hand corner! Thus, very cleverly, George invoked one of nature's basic laws—people fear what they do not understand. No one understood what George was doing (neither did he) so everyone was a little more than leary of the whole deal from the time the first chart was put up. This fact coupled with his well ill-chosen and ill-trained inspectors set the stage for as perfect a failure as one could wish for.

There was another problem which George also handled as a masterpiece of blundering. It had to do with his relationship to his fellow supervisors. It didn't take George long to figure out that ignorance on their part was his best policy. He accordingly told them little and even that was well cloaked in confusion. You see, he didn't want people going to *their* supervisor for information—*he* was the man with the educated brain and the giver forth of wisdom in many degrees—let them come to him! As can readily be seen, this won a goodly share of indifference for George's program as far as the supervisors were concerned, and when he started to sink they were the first to throw him an anchor!

George was now completely armed for the grand beginning. He had his inspectors, (?), his control charts (??) and a well (???) introduced program designed to alienate everyone from the Janitor to the VP-Production. The stage was set, and George was ready to go-go-go! Came the day, and George sallied forth, shut the pressroom down (without telling the Super or the foreman) and called the pressmen together. Briefly he gave them a "birds and bees" talk and outlined the future about as follows—

a) A new day had dawned for good old Profitless—
b) Things would be different from now on—
c) The inspectors were in the saddle and they had been instructed to
d) *Tell* 'em, not *ask* 'em!
e) Their record would stand against the pressmen
f) Quality Control was a *police action*, so
g) Quality had *better* improve—*or else!!*

The results of this introduction were startling—as a matter of fact, George hardly made it to the door and when he got home he decided to take his vacation right about that time—.

A little later on when things simmered down and George managed to sneak quietly in the back door, he met his last major problem. His management still thought there was some promise in the Quality Control idea. This would never do! George huddled with himself—George thought—and George figured out the problem. First of all, it was *he*, George, that knew all the answers—what need had he of top brass! Let *them* listen to *him!* So George wrote a report on progress to date. He sent it to the VP-Production with copies to the President, Vice Pres. Sales, and the pay master (for obvious reasons). The report was a masterpiece. George was careful to follow the cardinal rule which says, "Never write a report the boss can understand." Now George was a Quality Control Engineer (2 weeks at Mousetrap U.) and the boss wasn't (4 years at Yerle and 2 more at Havard graduate school of business). By using a little extra effort, George managed to make even the ordinary terms quite unintelligible and by the time he finished the report, even he didn't understand it! It proved to be a masterpiece of gobble-de-gook—and it also proved how dispensible George really was. Alas—poor George—I knew him well—.

Now, the wisest man that ever lived has told us that "there is a time and a place for everything under the sun—". So perhaps there has been a place for our folly, but so also is there a place for a little reflecting on serious matters.

George's experience at Profitless Printing might be considered humorous if it were not actually so tragic. Personally, I have seen every one of George's blunders seriously tried to one degree or another—and always with the same result—failure. As a matter of fact, almost every failure in Statistical Quality Control can be laid at the door of one or more of these mistakes. A little serious reflecting on a few basic principles could avoid such tragedies.

Let us look briefly at the positive approach.

1) Statistical QC deals with—
   Machines
   Materials
   Human beings
   To ignore the last is to court disaster, for any real gains Statistical QC might make are achieved only *through the hands of production workers.*
2) There are certain basic human desires that must be satisfied in order to have any human program be successful.
   a) "I want to be important"
   b) A sense of human dignity
   c) A pride of accomplishment
   d) A sense of "belonging"
   To the degree that any program meets these basic human desires it can be successful. To the extent that it falls short of doing so, it will probably fail.
3) In 1953, the annual Bolton Contest was written on the subject, "The Obligations of a Company to its Employees." An analysis of the replies was revealing. It indicated that these things, in the order given, were most important.
   a) Security and recognition
   b) Quality of management
   c) Opportunity to gain advancement
   d) Information—"How am *I* doing?"
   e) Job rating
   f) Job training
   Notice that money was not the most important, but the things that tend to meet the basic human desires—these are the important things in life.

Quality control is a very fruitful field and, in its larger sense, can contribute much to the American way of life. In many areas the modern approaches to this problem are completely indispensible, for older methods have simply been outmoded by demands they could not meet. It is tragic that many good quality programs are doomed before they are started simply because they are not built upon a sound psychological foundation. Someone has well said that the only way to make anyone do anything (in a free society) is to make him *want* to do it. This is true. The Greatest Man that ever lived has counselled us "Do unto others, even as ye would have them do unto you". A liberal application of this principle can turn failure into success and insure a program's acceptance by the only people in the world that can make it work—the men on the firing line of production.

Professional Engineering Status For the Quality Control Engineer?

FINAL REPORT*

Abridged

Special Committee on Professional Development
American Society for Quality Control

A. V. FEIGENBAUM, Chairman
R. M. BERG, Secretary

Introduction

About mid-1957 Dale Lobsinger and Leon Bass appointed a special *ad hoc* Committee on Professional Development, chairmanned by Dr. A. V. Feigenbaum, "to study the problem of developing a course of action for ASQC aimed at securing recognized professional engineering status for the quality control engineer."

The committee has studied the problem and has made appropriate recommendations to the Society officers. It is considered that the work of the *ad hoc* committee is now complete and this report is prepared to summarize the pertinent work of the group and to review the present status of the professional development project.

Members of the committee were A. V. Feigenbaum—chairman, R. M. Berg—secretary, E. C. Harrington, D. A. Hill, P. A. Robert, R. Schin, W. G. Thompson, W. R. Weaver, and M. E. Wescott.

In addition, numerous visitors including ASQC officers and section representatives attended (and contributed to) many of the seven meetings which the committee held over the period Nov. 15, 1957 to Dec. 5, 1958.

The work of the committee was quickly separated into six tasks and prime responsibility was assigned to the individual indicated:

R. Schin—The development and documentation of the basic elements of the work of the professional quality control engineer. The collation and integration of comments received thereon and the preparation of updated revisions as deemed appropriate.

W. G. Thompson—The integration of these professional standards with employers of quality control engineers.

M. E. Wescott—Professional orientation of membership. The development of education and self-improvement programs through which local sections may help members increase their membership grade through "moving up the professional chairs."

M. E. Wescott—Working with colleges and universities to encourage the introduction of quality control engineering as a particular area of technical education.

R. Schin—Working with state and national agencies so as to encourage the recognition of quality control engineering as an area suitable for professional engineering licensing.

ASQC LCS Code 000:00:000
*Completed January 30, 1959.

Paul Robert—The outlining of areas of national, state and local contribution and service by the quality control engineer, in recognition that such public service is an inherent requirement for professionalism.

The balance of this report will summarize briefly some of the thinking of the committee on each of these items, what has been accomplished, and what the committee has recommended for future action.

The Basic Elements of Work of Quality Control Engineering

Defining the quality control engineering function was recognized as a top priority assignment for the committee and, therefore, was established as the first project or Phase 1 of the six-phase program. A firm definition of the job function represents the basic foundation from which all other aspects of professionalism must stem. An appropriate document was prepared and published in the February 1958 issue of *Industrial Quality Control* under the title: "The Professional Work of the Quality Control Engineer." This article was intended to stimulate discussion and encourage comment from quality control people as well as others outside the quality control field. A number of top-management people, through encouragement from D. A. Hill, offered comments which will be valuable in making further revisions.

Accordingly, the committee recommended that there be established a permanent "Professional Work Elements Committee" with R. Schin as chairman reporting to the vice president of Professional Development. The task of this committee will be to refine the present Basic Work Elements Document. (A committee representing industries, government and educational institutions has been appointed and is actively engaged in revising the work elements.).

Integration of Professional Standards (Work Elements) With Employers of Quality Control Engineers

The task of the committee changed drastically in character during the year as a result of the committee's deliberations, and is now more properly identified as "Management Relations." The committee concluded that there was far more to their work than the building of a supply of qualified quality control engineers and recognized the need for also demonstrating to management the need for the work of the quality control engineer. In the words of Chairman Feigenbaum, "I know of no single incident in product development where supply creates its own demand and, as a matter of fact, economists say it never does. So unless there are parallel programs for developing the demand along with the supply we get nowhere."

Hence, there is a need to build strong relationships with the management who employ quality control engineers. The committee agreed that much more effective ways of communicating to management must be found than the occasional "Management Night" at section level or the management-centered sessions at national conventions. We must meet top management at their level, in their circles, in their press. We must sell management that the skilled quality control engineer can offer truly professional skill in solving the perplexing quality problems that plague management. Management must be convinced that the professional quality control engineer sees the problem as management sees it—namely as a business problem involving profit and loss, business strategies, and technological breakthrough.

To carry forward this phase of the program the committee accepted a recommendation from D. A. Hill that a management relations committee, made up of top management people who have an intense interest in quality matters, be established in the continuing structure of the Society. This would be neither an honorary nor advisory group but, rather, a working group advising the Executive Committee on how best the Society can serve and communicate with top management.

Professional Orientation of Membership, Section Level Programs

Early in the life of the Special Committee on Professional Development, there was proposed and approved a "kit bag" designed to provide section officers with the framework of possible activities aimed at awakening an awareness at the grass roots of ASQC of the character and importance of the problem of professional status for QC engineers. Several sections were selected to serve as pilot sections in developing and implementing section programs for professionalism.

The broad problem was outlined to the sections as follows:

a. Lack of the total quality control concept in industry
b. ASQC must raise its sights
c. The basic work elements must gain recognition.

The sections were urged to organize a local Professionalism Committee, get the facts by analyzing local industry, and, finally, to take action. A regular section meeting devoted to the subject was urged. The solicitation of interest of colleges and universities in the area was encouraged. Work with the Education and Training Committee on local section training programs was advised to help individual section members realize the great importance of advancing themselves in membership grade and hence in professional stature. Bibliographies were provided to assist members in self-study. The extremely vital job of advancing members in grades of membership as they become eligible was emphasized. Excellent progress along the above lines has been reported by all the participating sections including Allentown-Bethlehem, Chicago, Cincinnati, Cleveland, Dallas-Fort Worth, Indianapolis, Lexington, Michigan, Milwaukee, Philadelphia, and Southern Connecticut.

The project most recently endorsed by the committee for consideration in larger sections involves the establishment of professional chapters within the local section organizational structure. The professional chapters would have their own officers and own program to supply the special needs of the professional group within the local section. There would be a certain amount of integration between the section and its chapters.

There has been a very timely and heartening reactivation of the Education and Training Committee of ASQC. This committee recommends that administrative guidance and supervision of education and self-improvement programs at the section level be assigned to this very excellent and competent Education and Training Committee.

We find encouragement from section reports that a nucleus has been created at the section level. An attitude of "What do we do next?" is emerging. The pilot work has been well done in enough areas and with enough diversification of emphasis to more than justify the initial intent that prompted evolvement of the kit-bag document. Vital now to this core element of our professional development effort is leadership at the Society level to consolidate these gains and direct their continuing exploitation.

Academic Curricula and Degrees

The Committee has sought ways of working with colleges and universities toward the introduction of quality control engineering as a particular area of technical education, and finally concluded that one or two engineering schools be located that are sympathetic to the idea and work with them towards constructing and staffing appropriate curricula. An earned degree in qualtiy control engineering should be tied in with state engineering licensing boards.

The committee has concluded that the best strategy lies in the direction of getting such curricula and degrees at the graduate level rather than at the undergraduate level. The total quality control concept which ASQC now sponsors calls for more maturity than can be expected from the undergraduate level even with an ideal program in a first-class engineering school. It is the committee's opinion that engineering schools of the caliber we want to reach and work with will be more receptive to a graduate program than to an undergraduate program. Further, and this is vitally important, such an approach stands to bring to this specialized training a high percentage of men who already have a recognized engineering degree plus the invaluable asset of mature field experience.

The Eduction and Training Committee should design a program of courses of sufficient scope and depth to lead to a master's degree in quality control engineering. The major emphasis in this program should not be on statistics but, rather, on the development of the concepts of total quality control.

Professional Engineering Licensing

The initial step in the development of this phase of the work was taken in April 1953, when R. Schin contacted 52 State and Territorial Boards of Registration and requested information relative to the individual state requirements for determining professional competency and responsibility in quality control engineering. To date, replies have been received from 24 state boards. The majority of these offered nothing more than the state laws pertaining to educational and experience requirements for professional licensing in general with little or no commitment as to their application to quality control engineering Briefly, a summary of the information provided:

1. Eleven of fifty-two Boards authorize and require registration in specific branches of engineering. The remaining Boards authorize registration as professional engineers with individual discretion under a code of ethics to practice and assume responsibility for competence in a chosen field.

2. Educational requirements—all laws require a knowledge of engineering and scientific fundamentals normally acquired through graduation from an approved college curriculum. There appears to be general acceptance by the Boards of approved curricula and recognized schools as determined by the Engineering Council for Professional Development.

3. Experience requirement—qualifications as an engineer must be demonstrated under one of the recognized branches. Quality control experience would be evaluated under Industrial Engineering and the burden of proof as to its (QC experience) engineering nature would lie with the individual seeking registration.

In addition, the comments from the individual state boards tended to both encourage and discourage further

(Cont. on page 23)

Mark Your Calendar Now!

MAY 1960						
SUN	MON	TUES	WED	THUR	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

14TH ANNUAL CONVENTION AND EXHIBITION

Hotel Sheraton-Palace — *San Francisco, California*

— ALSO —

MID-PACIFIC QUALITY CONTROL CONFERENCE

Hawaiian Village Hotel — *Honolulu, Hawaii*

MAY 30—JUNE 1, 1960

Special ASQC Tour Arrangements to Hawaii will be Available

YOUR HEADQUARTERS for PRECISION

DoALL

offers a complete line for every use ...all available from ONE local source

No matter what your needs for accurate dimensional control in measuring

- lengths
- heights
- widths
- angles
- diameters
- flatness
- parallelism
- finish

DoALL has the instruments and equipment to help you solve your problems quickly and economically. And DoALL has the long experience necessary to advise you as to proper procedures, methods, results. This service by factory-trained specialists is free.

DoALL precision measuring and inspection equipment is carried in stock—ready for immediate delivery—in your nearby DoALL Store. Here's one reliable source . . . one responsibility . . . for more than 1500 top-quality products. This large local inventory is backed by a $2,000,000 central warehouse stock—connected to each DoAll Store by Teletype for prompt service.

DoALL EDUCATIONAL AIDS

In addition to the free services of its dimensional quality control specialists, your nearby DoALL Store offers many educational aids. These aids include: "Height Combination Tables," "Heat Expansion Calculator," "The Facts of Gage Block Life," "Fringe Line Pattern Wall Chart" and others. Ask your DoALL specialist for copies.

COMPLETE CALIBRATION SERVICE

DoALL gage block users and owners of other gage blocks can have their blocks recalibrated by DoALL's laboratory technicians. Inspection and calibration services are also available for thread, cylindrical, plug and ring gages.

GB-32

THIS IS A TYPICAL DoALL STORE

1 GAGE BLOCKS AND ACCESSORIES

Accuracy begins with fine gage blocks. Get the best. DoALL gage blocks offer the utmost in accuracy—with tolerances that meet or exceed N.B.S. requirements. What's more, you get the finest finish in the industry, patented "Burr Proofing," special processing to guarantee stability. DoALL offers a complete line—21 sets, 5 to 121 pieces—in rectangular and square styles. AA, A+ and A grades.

NEW! 56-PIECE SET. A new, practical set for shop use gives more useful dimensions with fewer blocks . . . saves time in setups, inspection.

MICRO-STEP GAGES. Quickly assembled with rectangular blocks and special holders. Result: an unlimited number of different, accurate gages for inside and outside measurement.

2 LAYOUT AND INSPECTION EQUIPMENT

DoALL black granite products go far beyond usual tolerances—beyond federal specifications. Manufactured to *Unilateral Tolerance Limits*. DoALL now delivers *twice* the accuracy for the same money or less.

DoALL black granite surface plates are made in 432 sizes, ledges, accuracies. Also available: angle plates, straightedges, parallels, master flats, magnetic chuck platforms, plate stands . . . and a complete line of metal plates, straightedges, accessories.

3 COMPARATIVE MEASUREMENT

DoALL offers a complete line of the finest electronic, mechanical and optical comparators—answering every need in laboratory, toolroom, shop and inspection departments. DoALL electronic comparators measure in millionths!

4 SHOP INSPECTION GAGES

At your local DoALL Store—complete lines of micrometers; calipers; thickness gages; dial indicators; snap gages; thread ring, cylindrical plug gages; many other types. Highest quality always.

5 OPTICAL INSTRUMENTS

All DoALL Stores feature the complete line of Bausch & Lomb Stereo-Zoom microscopes, toolmaker's microscopes, readers, magnifiers. And for utmost precision in optical production measurement control—the B & L Contour Measuring Projector.

6 LIGHT WAVE MEASUREMENT

DoALL monochromatic lights, using a helium light source, and optical flats are necessary for inspection by interferometry. "Monolights" are portable, made in two sizes. DoALL optical flats of pure, fused Brazilian quartz—made in round and square styles.

7 SURFACE FINISH GAGES

Surface roughness scales and specimens aid in specifying and inspecting both flat and cylindrical surfaces. Flat scales show 13 representative surfaces. Cylindrical scales—available in internal-external and turned-bored styles. Specimen sets show 25 types of surfaces on ten blocks.

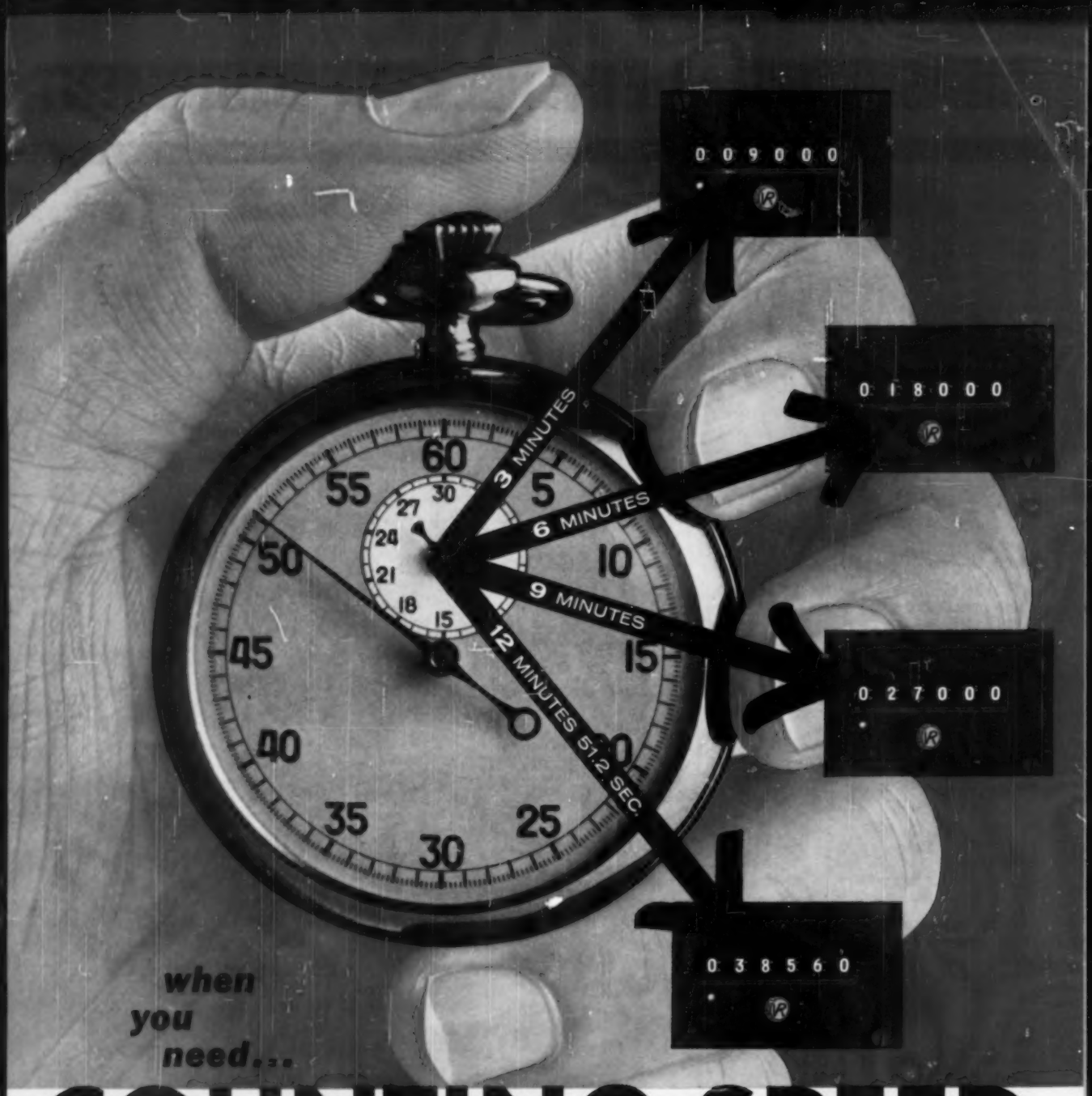
8 ANGLE MEASUREMENT

DoALL sine bars and plates are produced to laboratory grade standards—within N.B.S. tolerances. Sine bars are 5 in. long. Sine plates—available in 5- and 10-in. sizes. Universal bevel protractors offer highest quality. Range: 0-90° through 360°.

THE DoALL COMPANY

MEASURING and INSPECTION EQUIPMENT

DES PLAINES, ILLINOIS



when you need...

COUNTING SPEED

Specify VEEDER-ROOT No. 1591 Quick Reset, High Speed Magnetic Counter

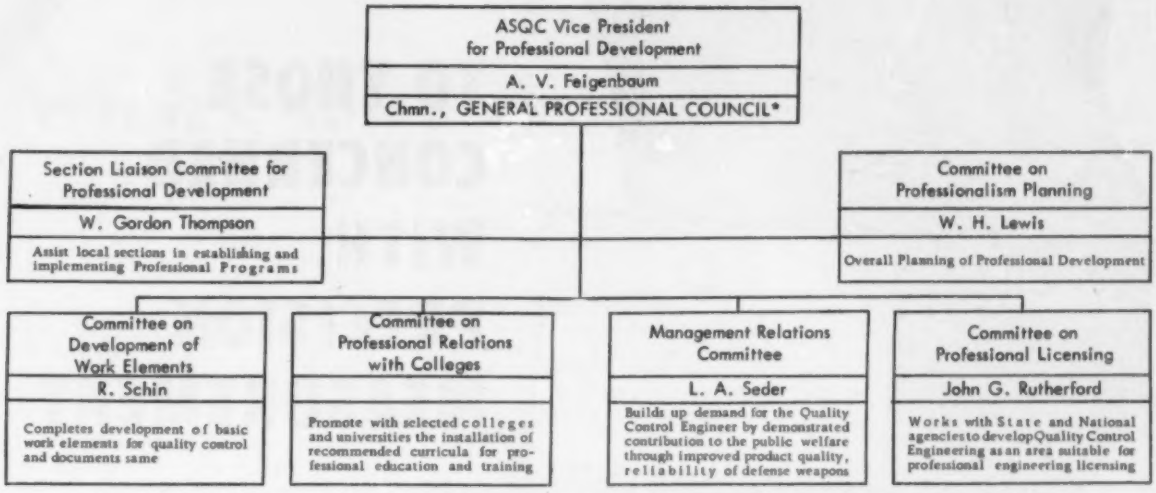
The No. 1591 resets to zero with the flick of a finger with manual reset, or in one second with electrical reset.

The No. 1591 is designed for accurate, dependable remote indication of machine operation, or for counting articles at high speed. Speed is 3000 counts per minute, 4 or 6 figures, manual or electrical reset, and made for panel mounting. Maximum panel area required is: 1.7″ x 2.1″ for four figures and 1.7″ x 2.8″ for six figures. The 1591 is *available from stock.*

Send for Veeder-Root Technical Information. Complete catalog data will be sent to you at once and application assistance is available from a Veeder-Root Counting Engineer if desired. Write or call today.

Veeder-Root Inc.
HARTFORD 2, CONNECTICUT
"The Name that Counts"

Hartford, Conn. • Greenville, S. C.
Altoona, Pa. • Chicago • New York
Los Angeles • San Francisco • Seattle
St. Louis • Montreal. *Offices and Agents in other principal cities*


ASQC Vice President
for Professional Development
A. V. Feigenbaum
Chmn., GENERAL PROFESSIONAL COUNCIL*
Section Liaison Committee for Professional Development
W. Gordon Thompson
Assist local sections in establishing and implementing Professional Programs
Committee on Professionalism Planning
W. H. Lewis
Overall Planning of Professional Development
Committee on Development of Work Elements
R. Schin
Completes development of basic work elements for quality control and documents same
Committee on Professional Relations with Colleges
Promote with selected colleges and universities the installation of recommended curricula for professional education and training
Management Relations Committee
L. A. Seder
Builds up demand for the Quality Control Engineer by demonstrated contribution to the public welfare through improved product quality, reliability of defense weapons
Committee on Professional Licensing
John G. Rutherford
Works with State and National agencies to develop Quality Control Engineering as an area suitable for professional engineering licensing

*General Professional Council is made up of chairmen of the above committees, plus representatives from the following committees: Education and Training, Program and Speakers, Professional Relations, Examining Committee, Professional Ethics and Qualifications, Committee on Awards.

expansion or specialization of recognized engineering fields at this time. However, overall comments suggested that recognition of a particular branch of engineering depended greatly on approval of curricula by the Engineers Council for Professional Development and on policy determined by the National Council of State Boards of Engineering Examiners. These two organizations have been contacted by letter to further determine the necessary steps leading to professional licensing in quality control engineering.

Since recognition of quality control engineering appeared to depend on the establishment of a related college curricula, it was ultimately recommended that the licensing program be developed in conjunction with the work with colleges and universities to encourage the introduction of quality control engineering as a particular area of technical education.

A letter was written to the U.S. Civil Service Commission to encourage the establishment of a quality control engineer job classification. The reply received from the Commission indicates a keen interest in our program and a willingness to cooperate with the ASQC in setting up standards and definitions with full consideration to be given to the quality control engineering field and its position in their present occupational classification structure. The appropriate course of action will presently be pursued to take advantage of the Commission's assistance in this phase of our program.

Identifying Areas of Civic or Public Service Contribution by the Quality Control Engineer

In recognition that public service is an inherent requirement for professionalism, correspondence has been conducted by P. A. Robert with several outstanding people in the field of quality control who, due to their important positions, have been able to contribute to the general welfare. As a result of this correspondence and numerous conversations with others, the following areas have been defined:

1. Improvement of quality of U. S. manufactured product.
2. Service toward conservation of national resources.
3. Consulting service to local, state and federal governments.
4. Advisory service to agencies responsible for establishing standards.

Organization for Continuing Work On Professional Development

The committee recognized that its responsibility to the Society extended beyond simply studying the problem and identifying tasks which could and should be done; the committee felt obligated to recommend an organization which could be structured into the existing Society organization to promote professional development on a continuing basis.

The proposal which the committee made to the President and the Board of Directors is shown on the attached chart. This proposal was accepted and work to get it firmly established is well underway.

Postscript

At the ASQC Convention in Cleveland, the General Professional Council met and organized as shown on the accompanying organization chart. The Education and Training Committee is developing suitable curricula as recommended in the above report.

The objective of the Professional Development Program is "To guide the development of Quality Control to a professional level".

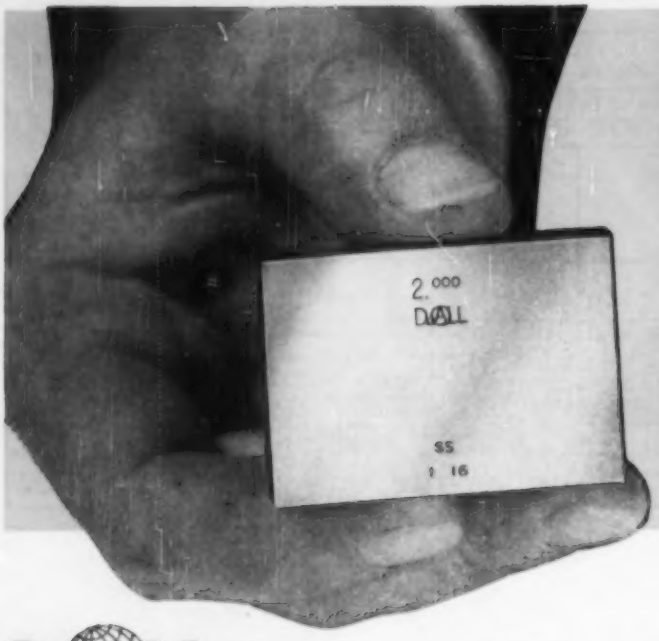
The goal of the program is "Recognition of Quality Control as a major technical profession some time during the decade of the 1960's.

This recognition is to be reflected in industrial staffing policies, state and national licensing policies, in relationships with other major technical professions, and in the character of course work offered in key educational institutions."

The various committees have accepted goals for 1959-60 to accomplish many of the recommendations given in the report. Sections will receive help from the Section Liaison Committee in getting Professional Development Programs established. These programs will provide individual members opportunity for professional growth.

Acknowledgement

The Special Committee on Professional Development wishes to record its deep gratitude to all the individuals who have contributed comments, criticisms, ideas, and help which enabled the committee to do its job in a relatively short period of time.



TO THOSE CONCERNED WITH PRECISION MEASUREMENT

DoALL introduces superior gage blocks of stainless steel

The DoALL Company is proud to report the successful completion of a development program to adapt the superior qualities of stainless steel to gage blocks. Stainless steel gage blocks have been tested by actual use not only in our own machine tool factories but in the plants of leading gage-using industries throughout the country. Calibration and inspection of blocks in use for many months overwhelmingly confirm initial laboratory findings regarding the exceptional properties of the new blocks.

Durability. Having a greater hardness (Rockwell C 68 to 70), they are far less susceptible to nicking, burring and wear than steel blocks. Periodic checks of both steel and the new stainless steel blocks under identical extended use conditions in machine shop inspection show a 4 to 1 ratio in favor of the new stainless steel gage blocks.

Corrosion Resistance. Of 201 stainless steel blocks used in shop inspection for one year without receiving any protection against corrosion, only one block in five showed traces of corrosion at the last inspection, while four out of five, or four times as many, steel blocks used under identical conditions suffered corrosion damage in the same period.

Stability. Metallurgical structure of the stainless steel block would indicate complete stability. Periodic calibration of shelf-stored blocks over a period of more than one year in our laboratories, and for extended periods by independent laboratories, discloses no significant change in dimension with time.

Thermal Coefficient. DoALL stainless steel gage blocks expand 5.75 millionths of an inch per inch of length for each Fahrenheit degree rise in temperature in the range of normal shop temperatures. Since the thermal coefficient of AISI-SAE production steels range from 5.5 upward, no compensation is necessary in making shop measurements with DoALL stainless steel blocks.

Surface Finish. The nearly perfect optical finish of DoALL Stainless Steel gage blocks exceeds even the .09 AA finish of DoALL Tool Steel blocks. Such a finish is essential to ultra precise evaluation by interferometry. Where the new blocks are used as shop standards superior finish provides wringing accuracy and increased life.

Wringing Characteristics. The extremely hard, optically-smooth gaging surfaces of DoALL SS gage blocks slip together easily, wringing out air and moisture to form a micro accurate combination. Because of their resistance to corrosion, the new blocks can be left in combination indefinitely without damage to gaging surfaces.

Availability. DoALL Stainless Steel gage blocks are made in all decimal sizes from .050000" to 4.000000" and in fractional sizes from 1/8" to 3/64". Accuracies are AA, plus .000002", minus .000002" and A+, plus .000004", minus .000002". They are offered in standard sets of 38, 81, 83, 84 and 86 pieces.

Recommendation. If you use gage blocks, this new development merits your investigation. Call your local DoALL Store or write:

The DoALL Company, Des Plaines, Illinois

What's New?

ROY A. WYLIE, *Editor*
Ampex Corporation

P-10-2—Standard Gage Co. has announced a thread wire carrier for the widely accepted 3-wire method of thread measurement. The carriers are useful in checking wear of thread plug gages for in-process inspection, and for receiving inspection. Measuring threads with these attachments is practically as easy as making plain O.D. measurements. As against hand-held wires, there is a considerable saving in time in making measurements. Carriers are made for micrometers or for measuring machines having ⅜ inch diameter anvils. Micrometer carriers fit a micrometer having .234 inch spindle and anvil diameter and an anvil height of .070 inch minimum, and will measure the pitch diameter of American National and Unified 60 degree threads from #0 through ¾ inch diameter, all standard pitches 10 through 80 threads per inch. Sets are available containing the 19 pairs of carriers for the above range plus a micrometer and a pair of measuring machine spindle adapters. The set for measuring machines covers all standard threads, #0 through 1 inch and pitches of 8 through 80.

★ ★ ★

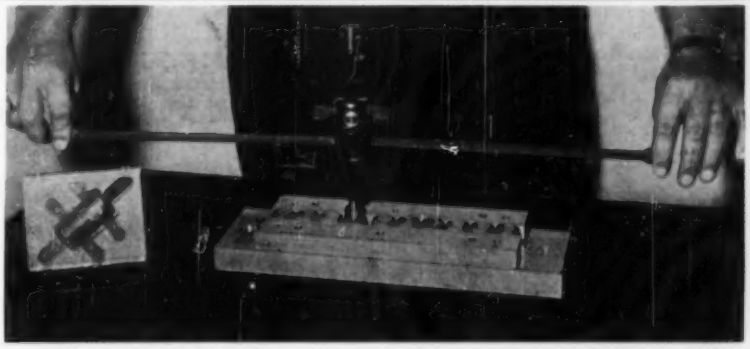
P-10-3—A new compact transistorized voltage comparator for instant go/no-go indication of voltage tolerance is now in production at Non-Linear Systems, Inc. The voltage comparator quickly and accurately determines whether or not an input voltage is within prescribed limits. The instrument will check any voltage from ± 0.001 to ± 999.9 volts. Operation of the comparator consists of setting the front panel dials to upper and lower limits of the desired range, and applying the voltage under test. Within 90 milliseconds the NLS 50 gives a clear "go" or "no-go" indication of voltage tolerance by means of colored lights. If the green "Between Limits" lamp lights, the applied voltage lies within the preset limits. If either of the red lamps lights—"Upper Limit" or "Lower Limit"—the voltage under test is too high or too low. The NLS 50 has a detection threshold of 500 micro-volts, a sensitivity of 0.005 per cent and its limit settings are precise to ± 0.01 per cent. Semi-conductors are used in all electronic functions. The transistorized comparison amplifier, limit setters, solid-state reference supplies and range multiplier are all included in the one instrument, a 3½ inch high unit that fits into a standard 19 inch rack. In addition to indicating voltage tolerances for the operator, the NLS 50 gives go/no-go command to such electrical devices as cut-off relays, sorting chutes, data printers, tape or card punches, and audible warning equipment.

★ ★ ★

P-10-1—Full scale production of four new AC and DC instrument calibration consoles has been announced by Weston. The new calibrators provide power source, circuitry, and control for the rapid calibration—including design, development, and service calibration of practically all types of portable, panel, switchboard, and recording type instruments used in the military services, aircraft industry, large utilities, and in industries using many and varied instruments in laboratories for production and quality control. Measurement accuracy of .05 per cent constant throughout the entire calibration range, from temperatures of 40 degree F. to 100 degrees F. is maintained. Simplified switching networks permit non-skilled operators to calibrate instruments accurately and quickly. Each of the four consoles with all operating equipment measures 30¾ inches high by 21½ inches wide by 19⅛ inches deep. If desired, the consoles can be removed from cabinets for mounting in standard 19 inch rack panels. Circuitry features complete safety protection for the operator. All units operate from a 60 cycle 110-120 volt source. Each consumes less than 500 watts under maximum output.

★ ★ ★

P-10-8—A new accessory to the Cleveland Roughness Meter is now available. Directly interchangeable with the present line of Cleveland Surface roughness pickups, it extends the measurement range of internal diameters down to ⅛ inch. It will penetrate a ⅛ inch diameter hole to a depth of ½ inch and a ¼ inch hole to any desired depth. The pickup may also be used on flat surfaces and outside diameters as small as .030 inches. The small size of the pickup makes it ideal for measurement of surface finish in slots, splines, gear teeth, lands, and other areas of limited size. The pickup will measure to within .025 inches of a shoulder. Stylus



P-10-4—The C. E. Foster Gage Corporation has just introduced to industry, the Foster Gage Handle. The Gage Handle utilizes the concept of "Suspended Motion" which provides faster manual gaging of tapped holes with reduced gage wear. In "Suspended Motion" gaging, the gage member is engaged a partial turn into the tapped hole in the conventional manner, then further operation is accomplished by reciprocal motion. Pulling of two tabs outward from the gage handle imparts rotary motion to the gage. Rotation is continuous and the velocity of rotation is directly proportional to the reciprocal motion. Since both hands are engaged in pulling the tabs, external forces on the gage handle are eliminated; thus, effectively reducing friction and the resultant gage wear. Reversal of the gages is accomplished by pulling another set of tabs. An optional design feature is available for "Suspended Motion" gaging in the form of a "Torque Meter" calibrated in inch pounds. The Torque Meter can be used to measure the relative torque applied to any given gaging operation. If the torque is in excess of predetermined limits, the thread is unacceptable. Another feature is the adaption of a bristle brush for rapidly and effectively cleaning tapped holes prior to gaging. The Foster Gage Handle is compact and light weight. Adapters are available for American Gage Design Standard, Taperlock or Reversible plug members up to three-fourths inch pitch diameter.

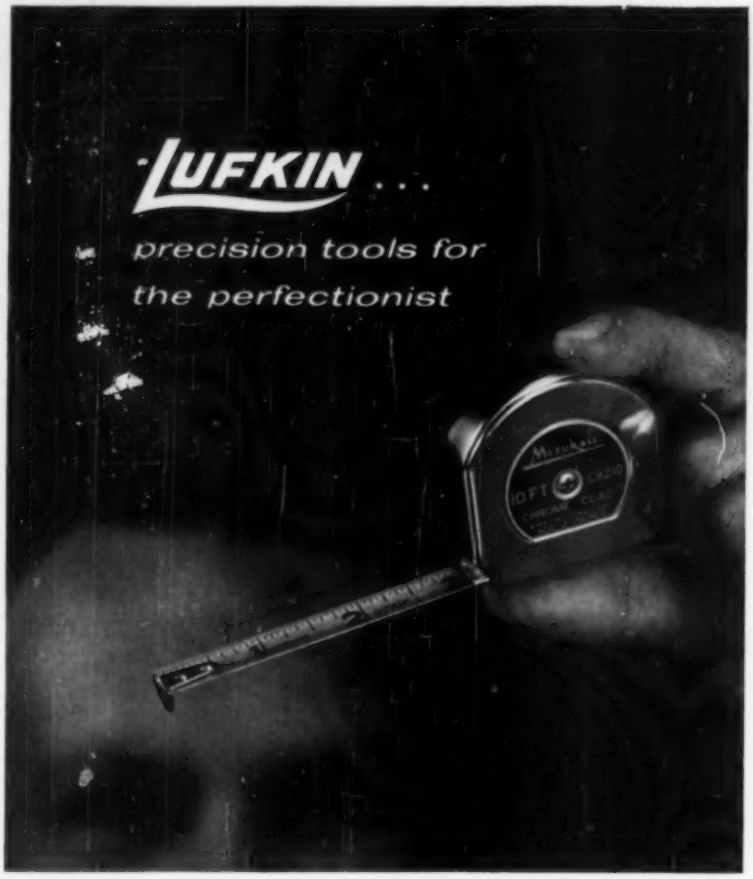
pressure is one gram, and the pickup meets all requirements of MIL-STD-10A and American Standard ASA B 46-1 1955. The calibration and diamond condition may be checked individually using the Cleveland Precision Reference Specimens.

★ ★ ★

P-10-5—A new type of direct reading Deep Bore Gage that quickly determines the diameter of grooves, bores, counterbores, recesses and hard-to-reach spots has been developed by Mueller Gages Company. The new type Deep Bore Gage is offered in three sizes to suit the requirements of various hole depths and diameters. The range covers holes between 1⅝ to 10 inch diameters and up to 10 inches deep. Maximum versatility is obtained with interchangeable tips that permit 3-point inside diameter measurements as well as 2-point outside diameter measurements. The Deep Bore Gages are equipped with .0005 inch dial indicators solidly mounted in the body and the construction is sufficiently rugged to insure long-life reliability under the normal conditions of shop handling. Trigger action of the gage eliminates human error because the gage is manually released and spring set to the position of measurement, insuring the highest degree of repeatability.

★ ★ ★

P-10-12—Polyplan Vernier swivel-jaw calipers, with a reading of 1/1000th of an inch, make the measurement between points on two separate axes as simple as on a single axis, thus making possible precision measuring right on the production line without the usual loss of time and inconvenience in removing parts being machined. They are available in 7 and 10 inch capacities, the jaws swivelling 360 and 180 degrees, respectively. The 7 inch instrument is a novel one. It has an upper rotating jaw, with a newly-designed round scale bar, depth gage and external ears. A handy and most unusual caliper.



Chrome Clad Mezurall for easy, accurate reading

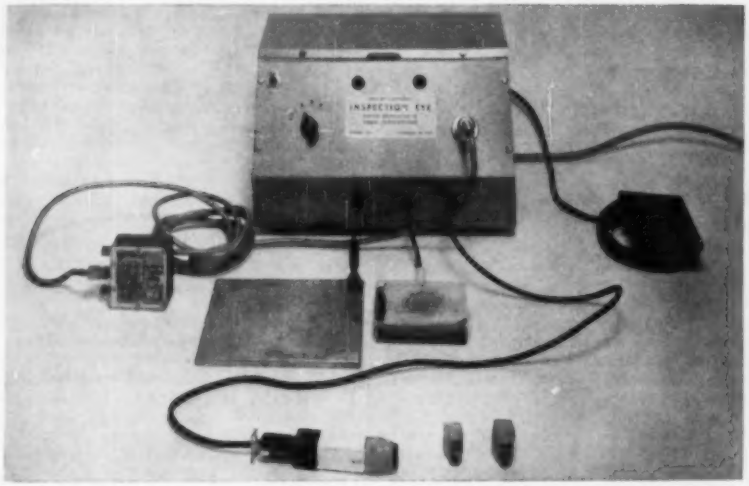
Chrome Clad® blade is easy to read because jet-black markings stand out sharply against soft, nonglare chrome. Can't rust, chip or peel.

Sharp Graduations in consecutive inches to 16ths . . . the first 12 inches on upper edge to 32nds.

Reinforced Steel case is tough and durable . . . packs the solid feel of quality you always expect from Lufkin.

Always buy from your Lufkin distributor. He knows precision tools. His stock is maintained to fit your needs. He is always ready to give you prompt and reliable service.

LUFKIN TAPE RULES
TAPES • RULES • PRECISION TOOLS
SAGINAW, MICH. • MIDDLETOWN, N.Y. • BARRIE, ONT.



P-10-13—An Electronic Inspection Eye, which was exhibited at the Thirteenth Annual ASQC Convention, is a versatile instrument of interest to anyone who has the responsibility of guaranteeing 100 percent acceptable components or assemblies, whether for military or civilian use.

Where it can be applied, it removes the human error factor in 100 percent inspection. Each part is automatically marked as OK or reject immediately as it is gaged; operator fatigue or carelessness is thereby eliminated.

The unit can be used with either of two sensing systems. One receives the signal from any gage that produces a green light for indicating parts within tolerance. This can be any inspection instrument, such as an air gage, comparator, etc.

A light sensing eye with a suction cup mounting is simply placed over the green light of the gage. When a part is placed in the gage and the indicator comes to rest, a foot switch is depressed and the piece removed and marked at once. The unit holds the signal for a predetermined interval (one to fifteen seconds) adjustable by turning the reset timer in the case, after which the signal is cancelled until another part is presented to the gage. Both GO and NO-GO symbols are contained in the compact marking head, but only one mark is made, depending upon the gage signal received.

With either sensing system provision is made for plugging in a counting setup to indicate the number of good and rejected marks made during the operation. Also available is a Signal Collector which permits the combination of several "Eye-Sensing" or "Contact-Gage Sensing" units to give a composite GO or NO-GO signal and consequent GOOD or REJECT mark on the part.

The second sensing system is designed for use with electric contact gages such as the Federal Electricator 134 series.

Metals and carbides are marked electro-chemically with a mark of your design for OK or reject symbols. Three current intensities are provided to give the depth of mark desired, either AC or DC. (DC for aluminum and certain other metals, AC for stainless steel, carbides, etc.)

Non-metallic parts—anodized aluminum, plastics, ceramics, etc.—are marked with a porous rubber ink stamp. One inking will mark a hundred or more parts, reinking done in one second. Good parts are marked with blue ink, reject parts in red ink. Both stamps are contained in a single compact marker, but selection is made automatically by gage indication.

NOW AVAILABLE TO YOU IN BOOK FORM!

PRACTICAL STATISTICS in EXPERIMENTAL DESIGN
By
Dr. A. W. Wortham • T. E. Smith

for

- *Reliability Engineers*
- *Quality Control Engineers*
- *Chemists*
- *Statisticians*
- *Design Engineers*
- *Test Engineers*
- *College Students*

"The best organized manual I have yet seen for leading a person by easy, logical stages from statistical fundamentals into experimental design."—Dr. J. M. Juran

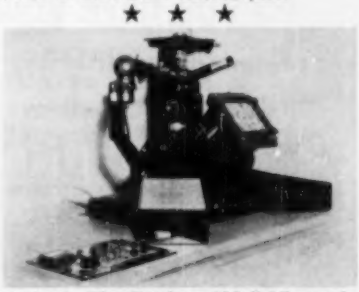
This book, written in the engineer's language by two leaders in the practical application of statistical methods, has been used effectively in manual form for industrial and academic courses in the Southwest.

Send Check or Money Order ($3.50 per book) to:

DALLAS PUBLISHING HOUSE, P. O. BOX 30143
1313 N. INDUSTRIAL BLVD., DALLAS, TEXAS

P-10-9—A battery-operated, general purpose ac voltmeter with useful frequency range of 1 cps to 1 MC is now available from the Hewlett-Packard Company. The model 403A voltmeter is a transistorized, compact instrument weighing less than five pounds. It measures AC voltages from 1 millivolt full scale to 300 volts full scale with an accuracy of ± 3 per cent 5 cps to 500 KC and ± 5 per cent 1 to 5 cps and 500 KC to 1 MC. The instrument has 12 voltage ranges and also reads db from −72 to +52 db. Because of its very low frequency limit of 1 cps, Model 403A is particularly useful in measuring sub-audio voltages such as those in geophysical and medical instruments and servomechanisms, as well as amplifiers and instruments operating into the broadcast region. The voltmeter has a 400-hour battery life, equal to 6 months of average use. Battery voltage may be checked easily at any time by a front panel switch, thereby assuring reliable measurements. Noise is less than 50 microvolts, and the instrument is completely isolated from power line or ground interference. Price of the Model 403A is $250.

★ ★ ★



P-10-11—The Reichert "Meflab" metallograph is now available from William J. Hacker & Co. Inc. This instrument was particularly designed for the laboratory operating on a restricted budget, but its versatility is great. It features a built-in camera with a 4 × 5 inch projection screen for ready adaptation of all standard Graflok accessories and 4 × 5 inch Polaroid Land Camera Back. The extensible bellows camera produces images and photomicrographs of all magnifications within the range of 32 × 2200x. The universal opaque illuminator facilitates bright, darkfield and oblique illumination. A wide assortment of objectives and eyepieces is offered. Optional features include components for micro-hardness and surface finish testing, grain-size measuring, polarization and phase contrast metallography.

section briefs

AKRON-CANTON . . . During August section officers held an executive meeting to prepare the year's activities. Committee meetings were also held by several committee chairmen. The approaching year seems to be off to a good start.

Harmon Bayer, management consultant from Detroit, Mich., will speak on "Organizing an Effective Quality Control Program." This will be one of the highlights of the year and will constitute a special program of "Management Night." All members are requested to issue a special invitation to their bosses and other interested management personnel. Mr. Bayer is a nationally known figure in QC consulting.

ALBANY . . . A meeting was held in Schenectady Sept. 1 finalizing the 1959-60 program.

Officers for the year are: D. S. Holmes—chairman; M. Moscinski—vice chairman; M. B. Lindquist—secretary, and P. Paniszczyn—treasurer. Committee chairmen are: J. F. Lauritsen—membership; W. Stafford—publicity; E. Bauer—examining; E. Bianco—education, and N. Turner—librarian.

Dr. Paul Olmstead, Bell Telephone Laboratories, spoke on the "Philosophical Implications of Statistical QC," at our first meeting, a dinner meeting, Sept. 10, 5:45 p.m., at the University Club in Albany.

We are anticipating a successful year, which includes a well-rounded program of guest speakers, plant trips, educational programs, and ending with a symposium on Evolutionary Operations May 12.

Alan Hoffman, General Electric Co., will speak on "Solving Linear Programming Problems by Inspection," Nov. 12.

Mr. Bianco, education committee chairman, has done an outstanding job in arranging for our educational program. A three term series of courses will be available for section members and others on statistical analysis and statistical QC. Classes begin Oct. 13 at Mont Pleasant Technical High School, 7 p.m., in Schenectady, N. Y.

ALBUQUERQUE . . . Two members of the section, T. C. Preston and W. H. Robertson, staff members in the reliability department, Sandia Corp., will present a paper, "Rescue Sampling," at the Western Regional QC Conference in Phoenix, Arizona, Oct. 23-24.

The 1959-60 program is as follows: Nov. 9—"Reliability of Electronic Components," M. F. Wilson, Collins Radio Corp.; December—no meeting or program scheduled; Jan. 20-21—"The Story of the Cutting Edge," DoAll Exhibit, joint sponsorship with ASTE, ACFNMA and ASQC; Jan. 22—"Statistical Methods for Engineering," Leon Bass, General Electric Co., Jet Engine plant; Feb. 9—"Repeatability of Gaging," Roy A. Wylie, Instrumentation Division, Ampex Corp.; Mar. 14—reading and judging of contest papers; Apr. 21—"Vendor QC Evaluation Program," J.Y. McClure, Convair-Division General Dynamics Corp., and May 9—annual banquet, presentation of new officers, social program. All meetings open at 8 p.m.

ALLENTOWN-BETHLEHEM . . . The executive committee held another planning meeting in the game room of the Hotel Traylor Aug. 26. Chairman Ken Stephens conducted the meeting. Reports of officers and committee chairmen were presented and discussed. Final plans for the annual family outing were made. Due to conflicting dates, November and March meetings were interchanged. Thus, on Nov. 11, we will tour the new Air Products plant at Trexlertown, and the speaker for March will be R. B. Shartle, Standard Register Co., Dayton, Ohio. Membership was reported as 76 renewals and 10 new members—as of meeting night. It was decided to explore the possibility of our section chartering a bus or buses to the Fifth District All-Day Conference in York, Pa., Apr. 2. Plans for the pre-meeting "buzz" sessions were announced.

CHATTANOOGA . . . Dr. Wen H. Li of the Chattanooga Division of E. I. du Pont de Nemours addressed the section Sept. 15. His subject, "A Case Study of a Designed Experiment," was enjoyed by everyone.

BALTIMORE . . . The executive committee met Aug. 13 at the Johns Hopkins University and discussed and approved the 1959-60 program. Frank J. Cullen, National Plastic Products Co., our new chairman, presided.

E. Taylor, chairman of the newly organized program committee, had prepared the program comprising nine scheduled meetings. A Ladies' Night will be incorporated in one of our meeting dates.

We agreed to repeat last year's successful QC basic training instruction given prior to our regular meetings. The objective of these pre-meeting sessions is to acquaint individuals new to the field of QC with the fundamentals of statistical QC.

Also agreed upon was a Seminar on Reliability which shall consist of two or three sessions on methods and techniques. A committee of three—Mrs. McAfee, Westinghouse Electric; Dr. Duncan, the Johns Hopkins University, and Mr. Baines, the Martin Co., will prepare the general outline of the program.

Planned also is an active program to personally contact management of numerous industrial firms in the Baltimore area and acquaint them with ASQC objectives. In addition, we will strive to obtain their support and interest in our section's activities.

do you have your copy?

Determination of Optimum Operating Conditions by Experimental Methods

Ralph Allan Bradley

J. Stuart Hunter

The combined work of these two fine authors can now be a part of your SQC technical library. Mr. Bradley's part, a four-page reprint from the July 1958 issue, is available at 15 cents per copy. Mr. Hunter's part, a 28-page reprint from the December 1958 and the January and February 1959 issues, is available at 75 cents per copy. The supply is limited.

ORDER YOUR COPIES TODAY!

ASQC, Rm. 6197 10-59
161 W. Wisconsin Ave.
Milwaukee 3, Wis.
.....copies, Bradley reprint @ 15¢ per copy
.....copies, Hunter reprint @ 75¢ per copy
.....amount enclosed.
(Remittance Must Accompany Order)

Name.....

Address.....

.....

make all checks payable to American Society for Quality Control

BINGHAMTON . . . The Adult Education Program sponsored by the Binghamton School District is offering a course in "Basic Statistical QC," at Binghamton Central High School. The course is scheduled for 12 weeks and will be taught by Robert F. Klein, a section member.

In the recreational aspect, a social evening of square dancing for beginners and pros is planned for the latter part of October at the Endicott Johnson Field House.

John Schneider, staff operations analysis, operations research department, IBM Corp., Owego, N. Y., will speak on "Probability, Its Influence on Sampling," at the October meeting.

BIRMINGHAM . . . Final arrangements for all 1959-60 meetings were completed at an officers' meeting Aug. 28. A copy of the program is being printed for distribution to the section members.

The QC Conference Oct. 15-16 at Tuscaloosa, Ala., has been publicized by the first mailing of announcements by the three participating sections: Huntsville, Mobile-Pensacola, and Birmingham.

BOSTON . . . The season opened Sept. 2, with a double barrelled program:

—In the afternoon Dr. H. C. Hamaker, chief statistician for the Philips Research Laboratories, Eindhoven, the Netherlands, discussed, "Experimentation in the Factory."

—After dinner, at the MIT Club, Dr. A. V. Feigenbaum "opened" our season's program with an inspiring talk on "Total Quality Control," one of the best this reporter has heard in the 15 years he has been concerned with quality control.

Both sessions were followed by question periods, just as stimulating and interesting as the talks. Our fall lecture series. "Introduction to Quality Control," will start at 6:30 Thursday, Oct. 8. Sessions will be held at Boston University on Commonwealth Ave. W. S. Hertzmark and D. J. Harrigan will teach, using their own text material. The final meeting of this series will be combined with our regular meeting at the faculty club.

CINCINNATI . . . The Cincinnati and Hamilton-Middleton sections were joint sponsors of the first District Eight meeting held Aug. 21. District Eight section officers and their wives were invited to the event held at Thomson Park, north of Hamilton, Ohio.

Prior to the evening business meeting, a mill tour of the Champion Paper and Fibre Co., Hamilton, Ohio, was conducted. At the park a fish fry was held and a film on personal communications was shown.

The district meeting was considered a success and could become an annual event.

The Cincinnati section program for 1959-60 was announced and will be comprised of ten business meetings, the annual January conference, the Education series, a symposium with the American Chemical Society on statistical methods and a vendor exhibit.

Two events are scheduled for November. The monthly technical meeting and "The Cutting Edge" exhibit and lecture to be presented by Do-All Co. In addition to the Cincinnati section, one ASQC section and four other professional societies will participate in the Do-All presentation.

CLEVELAND . . . The executive committee voted Aug. 28, to publish a Yearbook which will be distributed with the chairman's letter and will be given to all prospective new members.

The professional development committee chairmaned by John Occasione has drawn up a questionaire to be sent to all members. The data from this questionaire will enable the committee to plan their program for the coming years.

Early in November the educational committee will start its fall program. A six week program is planned in both the fundamentals and in advanced techniques. Full details can be obtained from Harry Wadsworth at Western Reserve University.

Vice chairman Lloyd S. Nelson will journey to Houston, Tex., in September to present "Analysis of Residuals," at the Third Annual Technical Conference of the ASQC Chemical Division.

DALLAS-FORT WORTH . . . The annual outing, originally scheduled to be held at Godfrey Ranch, was held instead at the "Steven F" Austin Dude Ranch at Grapevine, Tex.

All of the Texas sections are looking forward to seeing Jack S. Gant, General Electric Corp., again in October. Jack substituted for Leon Bass in 1958, and his talk was enjoyed so much that it was decided to invite him to make a return visit. He will speak on "Blueprint and Measurement Reliability."

DELAWARE . . . The new executive committee, under the enthusiastic guidance of chairman Francis Holden, has been meeting during July and August and again this year there are several firsts for the Delaware section on the agenda.

The fall season will open with the third annual Ladies Night Oct. 1. Of special interest to the ladies will be Miss Trienah Meyers, director of the market surveys section, Agricultural Marketing Services, U. S. Department of Agriculture, Washington, D. C. Miss Meyers will discuss "Consumers Discrimination and Preference Testing in the U. S. Department of Agriculture."

ERIE . . . Members of the executive committee met Aug. 18, to discuss the 1959-60 program. Speakers for the year were discussed and a plant tour was planned. The educational program will be carried on this year immediately prior to each monthly dinner meeting.

Officers for the coming year are Richard Love, Chairman; Ray Hayes, vice chairman; Clarence Haycox, secretary treasurer; Don Broderick, program chairman; Luris Klohr, membership, and Mary Louise Serr, publicity.

EVANSVILLE-OWENSBORO . . . The executive committee met Aug. 19 in Evansville. Details of the September Management Meeting at Westhaven Gun Club were discussed and finalized. It was decided to take pictures of all meetings during the coming year and present them to local newspapers for publication.

The November dinner meeting will be held at Gabe's Restaurant in Owensboro. James F. Bourquin, plant manager, St. Paul Division, Whirlpool Corp., St. Paul, Minn., will speak on "Top Management Decision Making."

GREATER MUSKEGON . . . The Board of Directors met at Bill Stern's Steak House for a noon luncheon meeting Aug. 26. The coming program was outlined by Mr. Presley and enthusiastically received by the board. Mr. Presley also reported that the Greater Muskegon section received 231 scrapbook points out of a possible 300. Other subjects discussed were education, membership, publicity, and a new constitution.

There will be a joint meeting with the Muskego Chapter of ASTE (tool engineers) Nov. 5, at the Doo Drop Inn. The Sheffield Corporation will present a program on "New Advances in Air Gaging."

THE NEW VERSATILE NON-DESTRUCTIVE COATING-THICKNESS TESTER

DERMITRON

Unit Process Assemblies, Inc., pioneers in non-destructive testing and specialists in electronics for metal finishing, offer their latest DERMITRON D-2 with these features:

■ Measures plated coatings on steel, brass, copper, zinc die-cast, aluminum, bronze and other metals; also, nickel on steel. ■ Measures anodize and hard-coat on aluminum and magnesium; also, paint, porcelain, organic coatings on non-ferrous metals. ■ Measures metal coatings on plastics, ceramics and other non-metallic materials. ■ Available with FOUR measuring probes for extra-wide thickness ranges from thin to thick deposits. ■ Only ⅛" circle area required for measurement. ■ You get fast, accurate, direct readings, plus versatility and portability. ■ Sorts metals and alloys.

Write for latest brochure and questionnaire to help solve your thickness testing problems.

UPA

UNIT PROCESS ASSEMBLIES, INC.

61 East Fourth Street • New York 3, N. Y.

HAMILTON . . . All our efforts for the past month have been concentrated on our 3rd annual All Day Forum Nov. 14 at McMaster University. Our general forum committee and our publicity committee met during the past month, formulating and finalizing plans which will make this a very interesting and informative event. Speakers will include: M. P. Straubel, M. J. McKerrow and W. R. Purcell, as well as representatives from the Hoover Co., and A. C. Wickman Ltd. Subjects are "Basic QC Training"; "Introduction to Reliability"; "Economics of a QC program"; "Standards and Specifications"; "Who and How of QC"; and "Measurements." The Forum is being sponsored jointly by the Hamilton, Ont., St. Catharines and the University of Western Ontario sections.

HAMILTON-MIDDLETOWN . . . On Aug. 21, all section officers of District 8, the district representatives, board members and their wives, attended a fish fry at Thompson Park, Hamilton. The meeting was co-sponsored by the Hamilton-Middleton and Cincinnati sections. Among the notables present was Leon Bass, past president, ASQC.

Our November meeting will be the annual "Management Night" dinner meeting. This is one of the highlights each year for the section. The speaker for the evening will be Miss Bonnie B. Small, department chief engineering, Western Electric Co., Allentown, Pa. Her topic will be "Training of Management in Statistical QC." Miss Small is well known in the field of statistics and her topic should be of interest to everyone concerned.

A coffee talk, "My Impressions of Russia," will be presented by William Murstein, Hamilton business and world traveler.

HARTFORD . . . Leroy H. Lindgren, chief industrial engineer, Joy Manufacturing Co., Claremont, N. H., will speak at the first scheduled monthly meeting Nov. 17, 6:30 p.m., at the Nutmegger House. Mr. Lindgren's topic will be of interest to many small job shop supervisory personnel and all quality control conscious personnel.

STATE UNIVERSITY OF IOWA . . . The first of five scheduled evening meetings was held by the section Aug. 28, in the Deere and Company Auditorium, Moline, Ill. Carl D. Larson, QC manager, General Tire and Rubber Co., Industrial Products Division, Logansport, Ind., was the featured speaker.

His subject, "Statistical QC, a Practical Sales Talk," was well received.

WOODWORKING

Quality Controllers

If enough of you are interested there can be an ASQC Technical Committee in your field through which to trade ideas. Send your name and address to:

Samuel P. Richards
Quality Control Supervisor
Hammond Organ Company
2915 North Western Avenue
Chicago 18, Illinois

In as much as this was the initial meeting of the current season, attendance was not too heavy, but we hope to rectify this in future meetings.

JOPLIN . . . A four day QC course was presented to the QC personnel of Eagle-Picher. The course was presented by D. D. Shelton of the Sandia Corp., Albuquerque, N. M.

LIMA . . . Courses in basic statistical QC and measurement methods began Oct. 8. Richard Peggs and Lloyd Harvey are co-chairmen of the education committee.

LOS ANGELES . . . On Thursday night Aug. 27, the section aided in the formation of a new section to be known as the Orange County section. The need for a section in sprawling Orange County came with the sudden move of major industries into the area. Our section is proud to have had a part in the formation of new sections in California, which will now number six. Sub-sectional basis was rejected by the new group since it believed that with an anticipated 150 new and transferring members, the section can progress successfully independent of outside help.

Eighty-four persons from all over the United States attended the 1959 statistical methods in industry courses held this year at UCLA under Dr. Edward P. Coleman, the coordinator for the series. The instructional staff included Lloyd Knowler, John Howell, Benjamin Gold, Irving Burr, Benjamin Epstein, Charles Hicks, Leslie Ball, Dale Lobsinger, Albert Wortham, members of ASQC, as well as others who were not members.

METROPOLITAN . . . On Oct. 28, the monthly meeting will be held in the Flight Room at the Roosevelt Raceway Shopping Center in Long Island at 7:45 p.m. The subject will be "reliability," presented by W. Biderman and W. Rombach.

On Nov. 12, the Metropolitan section is having another of it very successful "Buzz Sessions." The topic of this Buzz Session is "QC in Management Decision Making." After everyone has had their opportunity to voice their opinions, the meeting will be keynoted and summarized by Dr. W. R. Pabst Jr., chief statistician of the bureau of weapons, Navy Department.

On Dec. 4 and 5, the annual two day Princeton Conference will be held at Princeton University, Princeton, N. J.

MEXICO CITY . . . The Section "Ciudad de México" celebrated its Eighth Anniversary Sept. 9 at the Hotel Ontario in Mexico City. Wives of the members were invited as guests, and past chairmen attended in a body. Members' wives and past chairmen also attended the anniversary celebration.

Carlos Reyes has been appointed Saddoris Award Chairman.

During the meeting of the Chemical Engineers Institute of Mexico Sept. 14, our member Domingo M. Lopez (Fellow) will speak on "Basic Concepts of Quality Control."

MILWAUKEE . . . The officers and chairmen of the Milwaukee section met Aug. 13, to review progress on finalization of this year's program. In addition to a progress report on the status of speakers, eight different training sessions were agreed upon. The training sessions will start at 4:30 p.m., and precede the regular meetings in September, November, January, February and April.

The November meeting of the Milwaukee section has been scheduled for Thursday, Nov. 12, instead of the usual 3rd Monday of the month. This was done to coincide with the meeting of the society officers in Milwaukee on the weekend of Nov. 13. Dr. Val Feigenbaum, a vice president of the Society, will speak at the meeting and it is hoped that as many ASQC officers as possible will be able to attend.

MINNESOTA . . . This fall the Minnesota section is conducting its sixth annual elementary training course in QC. The course is given for people with little or no previous training in QC and, as in previous years, is designed to familiarize the enrollees with the aims, fundamentals and basic techniques of statistical QC. The eight sessions (held in October and November) will include lecture, demonstration, and class work. Aside from the stated objectives, the courses given by the section in earlier years have all been successful in attracting new interest in QC and new section members.

Our Nov. 18 meeting on "Human Relations Problems in Engineering" carries on two pleasant customs of the Minnesota section. Our wives and guests will be invited, and it will be a joint meeting with our friends in the Minnesota Society of Industrial Engineers.

MONTREAL . . . The Third Annual All Day Forum on Oct. 24, with an expected attendance of 200 persons, promises to be a major contributing event in the 1959-60 calendar. The general theme of "Greater Quantity, Better Quality, Lower Costs," appeals to all those connected with QC in industry. Chairman Vance Ward, with the assistance of the All Day Forum committee, has gone "all out" to make this year's event one of the better forums of the year.

The first annual dinner meeting will be held Nov. 30. Our guest speaker will be our own vice president, Frank Clow, who will speak on "Quality Costs." The development of speakers within our sections is an admirable trend. We must continue to develop internally if we are to make any significant expression externally. Leaders like Frank Clow, John Pringle, Vance Ward, and Roger Lessard are helping us to develop within the section.

NORTHEAST TENNESSEE . . . Stanley Murray and Kyle King of Tennessee Eastman completed the June course on "Design of Experiments" at Purdue University, Lafayette, Ind.

Bob Beard of Tennessee Eastman attended the June QC course for Graphic Industries at the Rochester Institute of Technology, Rochester, N. Y.

Ralph DeBusk of Tennessee Eastman attended an intensive course in QC at the University of Michigan, Ann Arbor, Mich., in August.

PARKERSBURG . . . An executive meeting was held Aug. 3, at the Howard Johnson Restaurant in Parkersburg. All offices and committees have been filled. Officers are: Larry Parker, chairman; Leon Maurer, vice chairman; Bob McAtee, treasurer, and Earl Slutz, secretary. Committee members are Bill Milligan, membership; Ed Albrecht, program; Ed Spader, Saddoris, Bob Stewart, publicity; education, Bob Lanyon, and Roy Buckley, arrangements. Another executive meeting was held at the same place Sept. 1.

PENSACOLA-MOBILE . . . A special executive board meeting was called by the section chairman and met Aug. 31. The meeting was called due to the resignation of Ellis Pierson, Chemstrand, who is being transferred to a Greenwood, S. C., plant.

In accordance with the by-laws of the Society, John Comish, Brookley AFB, assumed the position of chairman. The board then elected D. H. Dannheisser, Chemstrand, vice chairman, and Jack Hensley, secretary.

The formation of a conservation committee, as suggested in the ASQC intercom, was discussed. Formation of the committee was unanimously approved, and Fred Seguin, Brookley AFB, was elected chairman.

Buford Appelman, QC superintendent, Texas Foundries Inc., Lufkin, Tex., will speak on a "Scrap Reduction Program," at the Nov. 17 meeting at the Brookley AFB, Officers' Club.

PHILADELPHIA . . . The regular dinner meeting of the Philadelphia section will be held Nov. 19, at the Germantown Cricket Club. Highlighting the dinner will be guest speaker H. I. Lill Jr., project engineer of the Nuclear Ship Savannah, New York Shipbuilding Corp., whose subject will be "From Sails to Atoms in Shipbuilding."

A new feature which was started in October and which proved to be a success were the technical sessions which followed the guest speaker.

For the November meeting, in Session A, Mr. A. Aubin, Underwood Corp., will speak on "Sampling Inspection." In Session B, Norman Miller, Frankford Arsenal, will discuss "Essential Considerations in the Design and Development of Military Specifications."

Support of the technical sessions is of great interest to your program committee since this added attraction required extra planning on their part. Guests are welcome. Dinner is scheduled for 6:15 p.m. For reservations contact Miss Mary E. Wolcott, SA 7-1500.

RHODE ISLAND . . . A council meeting was held at the home of Mr. Goldthwaite to complete plans for the section's educational program, which is held in conjunction with the University of Rhode Island. The program is directed by P. K. Moffit, who has succeeded your reporter, Albert J. La Greca.

Al Cummings of Braun and Sharpes will be chairman of the New England Conference to be held at the Biltmore Hotel, Providence, R. I., Nov. 2-4. Mr. Cummings will be aided by Raymond P. Fournier, arrangements chairman, also from Braun and Sharpes. Plans are underway to accommodate 500, as the enthusiasm in QC in this area has taken great strides. The entire membership of the R. I. section will assist in making the conference the greatest ever.

With the expansion of the electronic industries in this area, our section has almost reached the 100 percent of its 1958-59 membership. It looks like our membership chairman has gotten off to a good start and it is expected to reach 150 percent of last year's membership.

SAN ANTONIO . . . The new section officers opened the section's program for the new season with its first executive meeting. After putting the final touch to the agenda for the coming season, the program chairman announced that through the combined efforts of the other Texas sections seven "Top Notch" speakers will address the four Texas sections on circuit tours. Meeting dates, speakers, time, place and subjects are being prepared for distribution to the membership. Plans are being formulated for plant tours, family socials and an improved training program. The section is embarking on another successful season.

SAN DIEGO . . . Once again the school bell has sounded for numerous members of our San Diego section as they get underway on fall semester courses being given on the many college campuses in our city. Most of these courses are of the evening or extended day type and certainly play an important role in our San Diego section activities.

New Orleans with the Mardi Gras has nothing on our town and the annual "Fiesta del Pacifico," judging by the wonderful time had by all section members who attended the many "Fiesta" activities. Our town, in addition to expanding industrial activities at a rapid rate, is also establishing a reputation as "the playground of the West."

A boost in section membership is anticipated as our drive gathers momentum.

Adios Amigos.

ST. LOUIS . . . During the fall semester, the St. Louis section is again presenting two of its three sequence courses in statistical QC. The courses are offered weekly for ten weeks. Rudolph Freedman and Arnold G. Braun are instructing in the basic course; Harvey Barnett and Joseph Movshin in the advanced.

The St. Louis section has what it believes is an ASQC "first"—an ASQC in-plant statistical QC training course. Paul K. Leatherman and John S. Randall are presenting the ten-week course to the Aeronautical Chart and Information Center, USAF. The course is limited to Air Force people only, whereas the courses described above are open to everyone.

SOUTH TEXAS . . . During a committee meeting Sept. 3, it was decided not to have an all day conference this year—partly because our section is co-sponsor with the Chemical Division of the Third Annual Technical Conference of the ASQC Chemical Division.

Instead, in February, our program chairman will attempt to arrange for a speaker that will be of particular interest to those of us in the "process industries." Our before din-

Electronics Division News Notes

The Electronics Division continues to grow and is now the largest division in ASQC with 1,100 members. In other words, about 10 percent of our Society members belong to the Electronics Division. For the past three years, the annual increase in membership has been nearly 30 percent. Such growth occurs as a result of an active program to benefit members, such as sponsorship of conferences and symposia, and publication of technical information in newsletters and other forms.

The Electronics Division has, in the past five years, sponsored five national Symposia on reliability, published a handbook, developed a comprehensive training course, established a national division award, in addition to furnishing speakers and moderators on reliability for national, regional, and local ASQC meetings. Information on all these activities is passed on to division members in the Newsletter.

Sixth Reliability Symposium

Contributed papers for this annual event, co-sponsored by the Division, have been received by the program committee. A considerable number of papers from this country, as well as several foreign countries, are thus far scheduled on the program. Judging from the abstracts, it appears that this coming year's Symposium will even surpass previous years in interest and technical quality. The Symposium will be held Jan. 11-13, at the Statler Hotel in Washington, D. C.

Technical Handbook Available

The "Production and Field Reliability Handbook," sponsored by the Technical Publications Committee, is now available. So far more than 400 copies have been sold. Copies of this handbook are being made available to Division members at a special price of $2.75 a copy. Send your order, with remittance, to John Bemesderfer, General Electric Co., Bldg. 500, Cincinnati 15, Ohio.

Technometrics

the journal of statistics for the physical, chemical and engineering sciences

Make it a part of YOUR technical library

co-sponsored and published quarterly by ASQC and ASA

Table of Contents, Vol. 1, No. 1

Response Surface Designs for Three Factors at Three Levels, *R. DeBaun*

The Analysis of Life Test Data, *R. L. Plackett*

Mathematical Probability in the Natural Sciences, *R. A. Fisher*

A Quick Compact Two-Sample Test to Duckworth's Specifications, *J. W. Tukey*

Some Statistical Aspects of Economics of Analytical Testing, *O. L. Davies*

Partial Duplication of Factorial Experiments, *O. Dykstra*

Condensed Calculations for Evolutionary Operation Programs, *G. E. P. Box and J. S. Hunter*

HERE'S HOW TO ORDER YOUR SUBSCRIPTION

ASQC members—$6.00 per year; non-members, libraries, etc.—$8.00 per year (ASA members may subscribe through their national office for $6.00 per year).

Send check or money order payable to TECHNOMETRICS to ASQC, 161 W. Wisconsin Ave., Milwaukee 3, Wis.

WHY NOT SEND YOURS IN TODAY?

ner training or workshop sessions will also be slanted toward the chemical and petroleum industries.

TENNESSEE . . . The section extends a warm welcome to two new members. Glenn W. Evensen has come to us from the St. Charles section, and Jack A. Reigert of Knoxville has returned to our ranks after a long absence.

With much regret, we bid bon voyage to William Morey of Nashville. Bill will make Sarasota, Fla., his new residence. Best wishes from all go with him.

TOLEDO . . . The annual Management Night meeting will be held Nov. 5. This event is invariably popular, closing with management guests participating in a lively discussion. Clarence R. Burdick of Houdaille Industries, Detroit, Mich., will speak on "Quality Control—A Management Tool." The chairman of the section, Theodore Meyers, will introduce Mr. Burdick.

TORONTO . . . November 4 at 8 p.m. J. A. DeGrote will speak on "Machine Process Capabilities," at the University of Toronto. Mr. DeGrote is a well known figure in the field and with an interesting subject like this his lecture is expected to be most informative.

The first of our three study groups proposed for this season will meet Nov. 17. This is a new venture for our section and we hope that it will meet with the same success that other sections have had with theirs. It is expected that it will be in the nature of a round table discussion of common problems related to sampling and it is hoped that something of benefit to all present will emerge from the exchange of ideas. The man with the gavel will be H. C. (Cliff) Hilditch with assistance from two of his contemporaries from Canadian General Electric. This has all the earmarks of a lively and fruitful evening.

UTICA . . . On July 22 the Utica section sent a committee to meet with the Syracuse section and discuss plans for a joint clinic to be held in Syracuse in the fall of 1960. A meeting is scheduled for Sept. 16 in Utica to review the tentative plans made and to determine what definite arrangements can be worked out.

WESTERN MASSACHUSETTS . . . This section and representatives of the Massachusetts University Extension have met and completed plans for a 12 week basic course to start Sept. 28. Instructors are to be H. Edelstein of Stanley Home Products Co., and S. Lezinski of Bigelow-Sanford Carpet Co. The instructors are senior members of this section.

Due to the necessity for giving complete support to the New England Conference Nov. 5-6, we will forego a November section meeting.

UNIVERSITY OF WESTERN ONTARIO . . . On Aug. 13, an executive meeting was held at the home of L. Moser. Plans for the coming year were finalized and a program was drawn up.

On Oct. 30-31, a two day training course will be held at the YMCA, Kitchener. The course this year is designed to be an appreciation course for production personnel.

WICHITA . . . New officers are Ralph Humphries, chairman; Howard Mitchell, vice chairman; Bob Johnson, treasurer; Max Eaton, secretary, and Roy D. Estes, Jack Pierce and Tony Kovac, directors.

The first dinner meeting of the season was held Sept. 1, at the Broadview Hotel. The featured speaker was H. Thomas Hallowell, Jr., president, Standard Pressed Steel Co., Jenkintown, Pa. The subject for his discussion was "Quality Control and Reliability." Assisting in this event were the Purchasing Agents Association of Wichita, the American Society for Metals, and the Society of Automotive Engineers.

The topic of Mr. Hallowell's conversation was of much interest to all in attendance, especially those who have been connected with the use of precision fasteners and titanium products.

WORCESTER . . . A meeting of the executive committee was held on Aug. 20, at the Worcester YMCA. A review of the program for the coming year was made by Mr. Sternlof, and plans were made to have pocket size programs printed for distribution. Mr. Olson, the chairman of the 1960 New England Conference, which is to be sponsored by the Worcester section, reported that advance planning is already underway for this conference. In the near future he intends to appoint an arrangements chairman to begin making arrangements for conference facilities.

Welton Parker of the Rockbestos Corp., in New Haven, Conn., will be the guest speaker at the meeting which will be held Nov. 19, at the Worcester Polytechnic Institute. Mr. Parker has been Quality engineer at the Rockbestos Corp. for many years, and he is currently a member of the task force committee on copper wire for ASTM. His subject will be "Quality Control in Wire and Cables."

SIGNIFICANT DIFFERENCES

. . . Akron-Canton—**Dr. Clyde H. Walden,** General Tire and Rubber Co., Akron, Ohio, has been promoted to director of quality control.

Don Dewing has transferred from General Tire in Akron to Aerojet General in Azusa, Calif., as corporate manager of missile reliability.

. . . Albuquerque—**Dr. Bernard Ostle,** supervisor of the statistics section, reliability department, Sandia Corp., has co-authored an article, "Correlation Between Sample Means and Sample Ranges," which was published in the June issue of the Journal of the American Statistical Association. The information contained in the article is useful in the interpretation of patterns of variation exhibited by production control charts.

Dr. Ostle was also granted leave from Sandia Corp., to act as an instructor of statistics in the summer institute for college mathematics teachers at Oklahoma State University, June 8—July 3.

. . . Allentown-Bethlehem—**Dave Hilder,** Western Electric Co., Allentown Works, has moved up to assistant superintendent of semi-conductor devices. He was formerly department chief of carriers. Dave is also a member of the section program aid committee for 1959-60, and is last year's section chairman.

Bud Gillette, also of Western Electric and also a past section chairman, moved from department chief of quality assurance to department chief of wage practices.

Wes Sawyer, Western Electric, Laureldale Works, moved from department chief of QC and inspection methods to department chief of reliability of procured semi-conductor devices department, a newly created department. Wes has been program chairman for the section for the past two years.

James J. Dotterer, Dana Corp., has transferred to our section from the Lansdale section.

. . . Baltimore—**Charles W. Flichman,** a past chairman, has been promoted to department supervisor in inspection at Western Electric.

Alfred M. Reck, our present publicity chairman, has been promoted to operating supervisor at Western Electric.

. . . Binghamton—**Joseph D. Fernbach,** IBM Corp., Owego, N. Y., has been promoted to manager of manufacturing.

Roger E. LeDuc, IBM Corp., Owego, N. Y., has been promoted to technical program coordinator in Titan project office.

. . . Birmingham—**Dale Phillips,** chairman, Birmingham section, has been placed on a special research assignment by his company, American Cast Iron Pipe Co.

. . . Boston—**H. L. Wildasin** is now director of laboratories and QC at the Rutherford Avenue plant of the H. P. Hood and Sons, Boston, Mass.

Edgar Wimpy has moved from CBS Hytron, to become manager of marketing research, CBS, Danvers, Mass.

Douglas E. Nieh has moved to a new job—QC engineer at Polaroid, Cambridge, Mass.

. . . Cincinnati—**Leon Bass,** General Electric Co., spoke on "QC and Top Management," at the 14th Midwest QC Conference at French Lick, Ind., Sept. 14.

Recently transferred into the Cincinnati section is E. G. Kelly of AVCO, Cincinnati, Ohio.

. . . Cleveland—**Bertrand L. Hansen** has been elected executive director of the American Management Institute, Inc., with headquarters at 735 Carnegie Ave., Cleveland. The Institute sponsors an integrated series of realistic cost reduction and cost control training programs.

Dr. Fred C. Leone assisted in teaching and administering the 16th Annual Program of Statistical QC and Design of Experiments for the Chemical Industries at the Rochester Institute of Technology last June.

. . . Delaware—**R. G. Mitchell,** QC manager of International Latex Corp., Dover, Delaware, assumes new duties as manufacturing manager of government and industrial products division of International Latex Corp. Bob will continue his relationship with QC as chairman of the textile division and as a member of the ASQC Committee for International Cooperation as well as several speaking engagements.

. . . Evansville-Owensboro—The section will sponsor a training program in basic QC beginning Sept. 22, and continuing for ten weeks. Don Ortberg will be the instructor.

. . . Greater Detroit—**Ken Forston,** senior member, has joined the Chrysler Corp., Highland Park, Mich., P & E Division as a QC engineer.

ASQC Workshop Seminar

Management of Quality Control

Pick-Congress Hotel, Nov. 12–14

Industry is giving Quality Control a great deal of emphasis because of its potential for improving product quality while increasing productivity and reducing related costs. This increased scope of quality control has multiplied the responsibilities of the Quality Manager. To help him fulfill his new role, the American Society for Quality Control will conduct a workshop-seminar on Management of Quality Control for the three days of Nov. 12, 13 and 14.

What is the purpose of the workshop-seminar? To explore in depth, tested methods of increasing the effectiveness of the quality control program in an industrial plant.

For whom is the program planned? For present and prospective Quality Managers. It is expected that the applicant will have reasonable familiarity with such standard texts as Grant, Feigenbaum, and Juran. To benefit properly from the seminar, the applicant should have a minimum of several years experience with major responsibility for quality.

Who will direct and conduct the program? The Director will be Paul C. Clifford, Professor at Montclair State Teachers College. Speakers and Discussion Leaders will include managers of outstanding quality control programs.

Registrants will be sent study materials and case studies prior to the conference. *Registration is limited to 75 persons and is complete only on receipt of the registration fee of $100* which includes the cost of three lunches.

Your Registration will be acknowledged. A room reservation card for the Pick-Congress Hotel will be enclosed with the acknowledgment.

From 8:30 am on Nov. 12 until 5:00 pm on Nov. 14 registrants will have a full schedule, including evenings. The title WORKSHOP has been chosen deliberately.

ASQC Workshop - Seminar
American Society for Quality Control
161 West Wisconsin Avenue
Milwaukee 3, Wisconsin

Please make reservations for the ASQC Workshop-Seminar on Management of Quality Control for the following man who satisfies the registration requirements as indicated in the announcement.

Enclosed is our check for $.....to cover ..... registrants. (Fee—$100 per registrant.)

Name .....

Title .....

Company .....

Address .....

City .....Zone No. ..... State.....

NOTE: Additional registrations may be made by attaching a list to the above coupon. Please include necessary information for each registrant.

Electronics Division News Notes

The Electronics Division continues to grow and is now the largest division in ASQC with 1,100 members. In other words, about 10 percent of our Society members belong to the Electronics Division. For the past three years, the annual increase in membership has been nearly 30 percent. Such growth occurs as a result of an active program to benefit members, such as sponsorship of conferences and symposia, and publication of technical information in newsletters and other forms.

The Electronics Division has, in the past five years, sponsored five national Symposia on reliability, published a handbook, developed a comprehensive training course, established a national division award, in addition to furnishing speakers and moderators on reliability for national, regional, and local ASQC meetings. Information on all these activities is passed on to division members in the Newsletter.

Sixth Reliability Symposium

Contributed papers for this annual event, co-sponsored by the Division, have been received by the program committee. A considerable number of papers from this country, as well as several foreign countries, are thus far scheduled on the program. Judging from the abstracts, it appears that this coming year's Symposium will even surpass previous years in interest and technical quality. The Symposium will be held Jan. 11-13, at the Statler Hotel in Washington, D. C.

Technical Handbook Available

The "Production and Field Reliability Handbook," sponsored by the Technical Publications Committee, is now available. So far more than 400 copies have been sold. Copies of this handbook are being made available to Division members at a special price of $2.75 a copy. Send your order, with remittance, to John Bemesderfer, General Electric Co., Bldg. 500, Cincinnati 15, Ohio.

Technometrics

the journal of statistics for the physical, chemical and engineering sciences

Make it a part of YOUR technical library

co-sponsored and published quarterly by ASQC and ASA

Table of Contents, Vol. 1, No. 1

Response Surface Designs for Three Factors at Three Levels, *R. DeBaun*

The Analysis of Life Test Data, *R. L. Plackett*

Mathematical Probability in the Natural Sciences, *R. A. Fisher*

A Quick Compact Two-Sample Test to Duckworth's Specifications, *J. W. Tukey*

Some Statistical Aspects of Economics of Analytical Testing, *O. L. Davies*

Partial Duplication of Factorial Experiments, *O. Dykstra*

Condensed Calculations for Evolutionary Operation Programs, *G. E. P. Box and J. S. Hunter*

HERE'S HOW TO ORDER YOUR SUBSCRIPTION

ASQC members—$6.00 per year; non-members, libraries, etc.—$8.00 per year (ASA members may subscribe through their national office for $6.00 per year).

Send check or money order payable to TECHNOMETRICS to ASQC, 161 W. Wisconsin Ave., Milwaukee 3, Wis.

WHY NOT SEND YOURS IN TODAY?

ner training or workshop sessions will also be slanted toward the chemical and petroleum industries.

TENNESSEE . . . The section extends a warm welcome to two new members. Glenn W. Evensen has come to us from the St. Charles section, and Jack A. Reigert of Knoxville has returned to our ranks after a long absence.

With much regret, we bid bon voyage to William Morey of Nashville. Bill will make Sarasota, Fla., his new residence. Best wishes from all go with him.

TOLEDO . . . The annual Management Night meeting will be held Nov. 5. This event is invariably popular, closing with management guests participating in a lively discussion. Clarence R. Burdick of Houdaille Industries, Detroit, Mich., will speak on "Quality Control—A Management Tool." The chairman of the section, Theodore Meyers, will introduce Mr. Burdick.

TORONTO . . . November 4 at 8 p.m. J. A. DeGrote will speak on "Machine Process Capabilities," at the University of Toronto. Mr. DeGrote is a well known figure in the field and with an interesting subject like this his lecture is expected to be most informative.

The first of our three study groups proposed for this season will meet Nov. 17. This is a new venture for our section and we hope that it will meet with the same success that other sections have had with theirs. It is expected that it will be in the nature of a round table discussion of common problems related to sampling and it is hoped that something of benefit to all present will emerge from the exchange of ideas. The man with the gavel will be H. C. (Cliff) Hilditch with assistance from two of his contemporaries from Canadian General Electric. This has all the earmarks of a lively and fruitful evening.

UTICA . . . On July 22 the Utica section sent a committee to meet with the Syracuse section and discuss plans for a joint clinic to be held in Syracuse in the fall of 1960. A meeting is scheduled for Sept. 16 in Utica to review the tentative plans made and to determine what definite arrangements can be worked out.

WESTERN MASSACHUSETTS . . . This section and representatives of the Massachusetts University Extension have met and completed plans for a 12 week basic course to start Sept. 28. Instructors are to be H. Edelstein of Stanley Home Products Co., and S. Lezinski of Bigelow-Sanford Carpet Co. The instructors are senior members of this section.

Due to the necessity for giving complete support to the New England Conference Nov. 5-6, we will forego a November section meeting.

UNIVERSITY OF WESTERN ONTARIO . . . On Aug. 13, an executive meeting was held at the home of L. Moser. Plans for the coming year were finalized and a program was drawn up.

On Oct. 30-31, a two day training course will be held at the YMCA, Kitchener. The course this year is designed to be an appreciation course for production personnel.

WICHITA . . . New officers are Ralph Humphries, chairman; Howard Mitchell, vice chairman; Bob Johnson, treasurer; Max Eaton, secretary, and Roy D. Estes, Jack Pierce and Tony Kovac, directors.

The first dinner meeting of the season was held Sept. 1, at the Broadview Hotel. The featured speaker was H. Thomas Hallowell, Jr., president, Standard Pressed Steel Co., Jenkintown, Pa. The subject for his discussion was "Quality Control and Reliability." Assisting in this event were the Purchasing Agents Association of Wichita, the American Society for Metals, and the Society of Automotive Engineers.

The topic of Mr. Hallowell's conversation was of much interest to all in attendance, especially those who have been connected with the use of precision fasteners and titanium products.

WORCESTER . . . A meeting of the executive committee was held on Aug. 20, at the Worcester YMCA. A review of the program for the coming year was made by Mr. Sternlof, and plans were made to have pocket size programs printed for distribution. Mr. Olson, the chairman of the 1960 New England Conference, which is to be sponsored by the Worcester section, reported that advance planning is already underway for this conference. In the near future he intends to appoint an arrangements chairman to begin making arrangements for conference facilities.

Welton Parker of the Rockbestos Corp., in New Haven, Conn., will be the guest speaker at the meeting which will be held Nov. 19, at the Worcester Polytechnic Institute. Mr. Parker has been Quality engineer at the Rockbestos Corp. for many years, and he is currently a member of the task force committee on copper wire for ASTM. His subject will be "Quality Control in Wire and Cables."

SIGNIFICANT DIFFERENCES

. . . Akron-Canton—**Dr. Clyde H. Walden,** General Tire and Rubber Co., Akron, Ohio, has been promoted to director of quality control.

Don Dewing has transferred from General Tire in Akron to Aerojet General in Azusa, Calif., as corporate manager of missile reliability.

. . . Albuquerque—**Dr. Bernard Ostle,** supervisor of the statistics section, reliability department, Sandia Corp., has co-authored an article, "Correlation Between Sample Means and Sample Ranges," which was published in the June issue of the Journal of the American Statistical Association. The information contained in the article is useful in the interpretation of patterns of variation exhibited by production control charts.

Dr. Ostle was also granted leave from Sandia Corp., to act as an instructor of statistics in the summer institute for college mathematics teachers at Oklahoma State University, June 8—July 3.

. . . Allentown-Bethlehem—**Dave Hilder,** Western Electric Co., Allentown Works, has moved up to assistant superintendent of semi-conductor devices. He was formerly department chief of carriers. Dave is also a member of the section program aid committee for 1959-60, and is last year's section chairman.

Bud Gillette, also of Western Electric and also a past section chairman, moved from department chief of quality assurance to department chief of wage practices.

Wes Sawyer, Western Electric, Laureldale Works, moved from department chief of QC and inspection methods to department chief of reliability of procured semi-conductor devices department, a newly created department. Wes has been program chairman for the section for the past two years.

James J. Dotterer, Dana Corp., has transferred to our section from the Lansdale section.

. . . Baltimore—**Charles W. Flichman,** a past chairman, has been promoted to department supervisor in inspection at Western Electric.

Alfred M. Beck, our present publicity chairman, has been promoted to operating supervisor at Western Electric.

. . . Binghamton—**Joseph D. Fernbach,** IBM Corp., Owego, N. Y., has been promoted to manager of manufacturing.

Roger E. LeDuc, IBM Corp., Owego, N. Y., has been promoted to technical program coordinator in Titan project office.

. . . Birmingham—**Dale Phillips,** chairman, Birmingham section, has been placed on a special research assignment by his company, American Cast Iron Pipe Co.

. . . Boston—**H. L. Wildasin** is now director of laboratories and QC at the Rutherford Avenue plant of the H. P. Hood and Sons, Boston, Mass.

Edgar Wimpy has moved from CBS Hytron, to become manager of marketing research, CBS, Danvers, Mass.

Douglas E. Nieh has moved to a new job—QC engineer at Polaroid, Cambridge, Mass.

. . . Cincinnati—**Leon Bass,** General Electric Co., spoke on "QC and Top Management," at the 14th Midwest QC Conference at French Lick, Ind., Sept. 14.

Recently transferred into the Cincinnati section is E. G. Kelly of AVCO, Cincinnati, Ohio.

. . . Cleveland—**Bertrand L. Hansen** has been elected executive director of the American Management Institute, Inc., with headquarters at 735 Carnegie Ave., Cleveland. The Institute sponsors an integrated series of realistic cost reduction and cost control training programs.

Dr. Fred C. Leone assisted in teaching and administering the 16th Annual Program of Statistical QC and Design of Experiments for the Chemical Industries at the Rochester Institute of Technology last June.

. . . Delaware—**R. G. Mitchell,** QC manager of International Latex Corp., Dover, Delaware, assumes new duties as manufacturing manager of government and industrial products division of International Latex Corp. Bob will continue his relationship with QC as chairman of the textile division and as a member of the ASQC Committee for International Cooperation as well as several speaking engagements.

. . . Evansville-Owensboro—The section will sponsor a training program in basic QC beginning Sept. 22, and continuing for ten weeks. Don Ortberg will be the instructor.

. . . Greater Detroit—**Ken Forston,** senior member, has joined the Chrysler Corp., Highland Park, Mich., P & E Division as a QC engineer.

ASQC Workshop Seminar

Management of Quality Control

Pick-Congress Hotel, Nov. 12–14

Industry is giving Quality Control a great deal of emphasis because of its potential for improving product quality while increasing productivity and reducing related costs. This increased scope of quality control has multiplied the responsibilities of the Quality Manager. To help him fulfill his new role, the American Society for Quality Control will conduct a workshop-seminar on Management of Quality Control for the three days of Nov. 12, 13 and 14.

What is the purpose of the workshop-seminar? To explore in depth, tested methods of increasing the effectiveness of the quality control program in an industrial plant.

For whom is the program planned? For present and prospective Quality Managers. It is expected that the applicant will have reasonable familiarity with such standard texts as Grant, Feigenbaum, and Juran. To benefit properly from the seminar, the applicant should have a minimum of several years experience with major responsibility for quality.

Who will direct and conduct the program? The Director will be Paul C. Clifford, Professor at Montclair State Teachers College. Speakers and Discussion Leaders will include managers of outstanding quality control programs.

Registrants will be sent study materials and case studies prior to the conference. *Registration is limited to 75 persons and is complete only on receipt of the registration fee of $100* which includes the cost of three lunches.

Your Registration will be acknowledged. A room reservation card for the Pick-Congress Hotel will be enclosed with the acknowledgment.

From 8:30 am on Nov. 12 until 5:00 pm on Nov. 14 registrants will have a full schedule, including evenings. The title WORKSHOP has been chosen deliberately.

ASQC Workshop - Seminar
American Society for Quality Control
161 West Wisconsin Avenue
Milwaukee 3, Wisconsin

Please make reservations for the ASQC Workshop-Seminar on Management of Quality Control for the following man who satisfies the registration requirements as indicated in the announcement.

Enclosed is our check for $.....to cover ..... registrants. (Fee—$100 per registrant.)

Name .....

Title .....

Company .....

Address .....

City .....Zone No. ..... State.....

NOTE: Additional registrations may be made by attaching a list to the above coupon. Please include necessary information for each registrant.

SECTION CALENDAR (OCTOBER 25—NOVEMBER 30)

SECTION	DATE	PLACE	TIME	SUBJECT	SPEAKER
Akron-Canton	Nov. 19	Iacomini's Restaurant	8:00 pm	Organizing an Effective QC Program	Harmon S. Bayer, QC Consultant
Albuquerque	Nov. 9	University of New Mexico, Mitchell Hall	8:00	Reliability of Electronic Components	M. F. Wilson, QC Director, Collins Radio Corp., Cedar Rapids, Ia.
Allentown-Bethlehem	Nov. 11	Air Products, Inc., Trexlerton, Pa.	8:00	Plant tour	———
Baltimore	Nov. 17	Baltimore Memorial Stadium	8:15	Dimensional Measurements Using Non-Destructive Testing	Bernard J. Cunningham, Westinghouse Electric Corp., Atomic Fuel Dept., Cheswick, Pa.
Buffalo	Oct. 26	Treadway Inn, Niagara Falls, N.Y.	6:30	Evolutionary Operations (EVOP) in Industry	Brant Bonner, Dow Chemical Co., Midland, Mich.
Chattanooga	Nov. 10	Patten Hotel	6:30	QC—A Management Tool	C. R. Burdick, Houdaille Industries, Inc.
Birmingham	Nov. 16	Anniston Ordnance Depot, Ala. (Tour 2:30 p.m.) Officers' Open Mess	5:00	Quality Assurance Program of Anniston Ordnance Depot	Paul E. Lalonde, John P. Anderson, chief, deputy chief quality assurance officer
Boston	Nov. 12	MIT Faculty Club	6:30	Vendor Certification and Control of Incoming Materials	W. A. MacCrehan, Bendix Corp., Radio Division, Towson, Md.
Cincinnati	Nov. 18	Engineering Society Building	8:00	How You Can Make a Multi QC Program Work	Harry O. Hebner, QC Manager, Monsanto Chemical Co., St. Louis, Mo.
Cleveland	Nov. 6	Cleveland Engineering & Scientific Center	7:45	Response Surface Experimentation	E. C. Harrington, Monsanto Chemical Co.
Dallas-Fort Worth	Oct. 24	Sky-Chef Room, Amon Carter Airport	7:00	Blueprint and Measurement Repeatability	Jack S. Gantt, General Electric Corp., Cincinnati, Ohio
Evansville-Owensboro	Nov. 17	Gabe's Restaurant, Owensboro, Ky.	6:30	Top Management Decision Making	James F. Bourquin, Whirlpool Corp.
Georgia	Nov. 20	A. French Building, Georgia Institute of Technology, Atlanta, Ga.	7:45	Testing of Purchased Yarn and Fabrics	Paul M. Felker, The William Carter Co., Barnesville, Ga.
Greater Muskegon	Nov. 5	Doo Drop Inn	6:30	New Advances in Air Gaging	The Sheffield Corp.
Grand Rapids	Nov. 12	Manger Hotel	7:00	QC—A Tool for Management's Use	C. R. Burdick, Houdaille Industries, Inc.
Hamilton-Middletown	Nov. 11	Plaza Motel	6:30	Training of Management in Statistical QC	Miss Bonnie B. Small, Western Electric Co.
Hamilton	Nov. 14	McMaster University	9:00 am	Hamilton Forum	Sponsored jointly by Hamilton, University of Western Ontario and St. Catharines Sections
Hartford	Nov. 17	Nutmegger House	6:30	Case Histories of Applied Statistics in a Job Shop	Leroy H. Lindgren
Joplin	Nov. 17	Neosho, Mo.	7:00	Tour of North American Aviation, Rocketdyne Division Plant	———
Lima	Nov. 10	Barr Hotel	6:30	Management Night	Joe Manuele, Westinghouse Electric Corp.
Los Angeles	Nov. 10	Carolina Pines (clinic, dinner 7 pm, program 8 pm)	6:00	Use of Data Processing in Evaluation of Vendors	Paul Sternberg & Roy Hendricks, Hughes Aircraft Co.
Metropolitan	Oct. 28	Flight Room, Roosevelt Raceway Shopping Center, Long Island	7:45	Reliability	W. Biderman and W. Rombach
	Nov. 12	Robert Treat Hotel, Newark, N. J.	8:00	QC in Management Decision Making & Buzz Session	Dr. W. R. Pabst Jr., Chief Statistician, Bureau of Weapons, Navy Department
Milwaukee	Nov. 12	Stratford Hotel	6:00	Total QC—What it is	A. V. Feigenbaum, General Electric Co.
Minnesota	Nov. 18	———	———	Human Relation Problems in Engineering	Richard W. Wallen, Director, Managerial Training Div., Personnel Research & Development Corp.
Montreal	Nov. 30	Salle Canadienne	6:30	Quality Costs	Frank Clow
Pensacola-Mobile	Nov. 17	Brookley AFB Officers' Open Mess, Mobile, Ala.	7:00	Scrap Reduction Program	Buford Appelman
Philadelphia	Nov. 19	Germantown Cricket Club	6:15	From Sails to Atoms in Shipbuilding	H. I. Lill Jr.
Rhode Island	Nov. 19	Engineering Building	8:00	Unannounced	G. C. Parkin, Minnesota Mining and Mfg. Co., Staff consultant and industrial statistical control
San Antonio	Oct. 27	Hilton Hotel	8:00	Blueprints & Measurement Repeatability	Jack S. Gantt, Supervisor, QC Engineering, General Electric, Evendale
South Texas	Oct. 28	HESS—Houston Engineering and Scientific Society	6:00	Blueprint and Measurement Repeatability	Jack S. Gantt, General Electric Corp., Cincinnati, Ohio
	Nov. 25	HESS	6:00	The Case of Percentage Sampling	James R. Crawford, Lockheed Aircraft Corp., Burbank, Calif.
St. Louis	Nov. 20	Golden Fried Chicken Loaf Restaurant	6:00	Fundamentals of Reliability	C. W. Myles, McDonnell Aircraft
				New Military Specs as Related to Industry	Claude Crowl, St. Louis Air Proc. Dist., USAF
Syracuse	Oct. 27	Turn Hall	7:00	Statistical Evaluation and Discovery	Dr. Paul S. Olmstead, Bell Telephone Laboratories, Whippany, N. J.
	Nov. 24	Turn Hall	7:00	Developing Industry Standards by Statistical Methods	D. H. W. Allan, American Iron and Steel Institute, N. Y., N. Y.
Toledo	Nov. 5	Lynn's Restaurant	6:30	QC—A Management Tool	Clarence R. Burdick, Houdaille Industries, Inc.
Toronto	Nov. 4	University of Toronto	8:00	Machine Process Capabilities	J. A. DeGrote, Supervisor Qual. Analysis, Ford Motor Co., Dearborn, Mich.
	Nov. 17	C. G. E. Auditorium, King Street	7:30	Work Sampling	In the Chair. H. C. Hilditch, C.G.E. Lamp Div., Toronto
Utica	Nov. 17	Hamilton Hotel	———	Modern Uses of the Range	Richard S. Bingham Jr., Carborundum Co.
Univ. of W. Ontario	Oct. 30-31	YMCA Kitchener	8:00 am	Two Day Basic Training Course	A. P. Deacon, Deacon & Associates, Brantford, Ontario
	Nov. 18	G.M. Diesel Ltd., London	8:00 pm	Plant Tour and Talk—IBM in Relation to QC	Jim Scranton, GM Diesel Ltd., London, Ontario
Western Massachusetts	Nov. 5-6	Providence, R. I.	———	New England Conference	———
Worcester	Nov. 19	Worcester Polytechnic Institute	7:00	QC in Wire and Cables	Welton Parker, Rockbestos Corp.

. . . Greater Muskegon—**Jack Fortenbacher,** Perfect Circle Centrifugal Foundry plant, has left Perfect Circle for Standard Automotive Parts Co., Muskegon.

. . . Hamilton-Middleton—**Dr. Ellis Parmenter** will present a talk at the Third Annual Technical Conference of the Chemical Division entitled, "Estimating Precision of Test Averages."

DuWayne Carlson, Champion Paper & Fibre Co., Ohio Division Process Controls Department, and also vice chairman of the Hamilton-Middleton section, has been appointed a part time instructor at Miami University Graduate School and will conduct statistical QC classes.

. . . Hartford—**Roy E. Fowler** has joined Pratt & Whitney Co., Inc., West Hartford, as QC technician. Roy formally held the same position at Ingraham Co.

. . . Lima—Promoted to analysts at Ford Motor Co., were **James Micheli, Dale Ross, Norman Melchi,** and **James Suter.**

Cecil Bowes is now QC manager with Westinghouse Electric Corp.

Darrell Fultz has been promoted to senior analyst at the Ford Motor Co.

John Hower is now unit supervisor in the Ford Motor Co., statistical section.

. . . Los Angeles—**W. R. (Bill) O'Hara,** Hughes Aircraft Co., has been chosen to succeed **David A. Hill** as director of the reliability and quality-general office of the company.

Paul E. Bruce has been appointed director of quality assurance for the Lockheed Electronics and Avionics Division (LEAD). In line with emphasis given the independent quality assurance program at LEAD, he will report directly to **M. C. Haddon,** general manager, and will be responsible for all quality, reliability, and inspection functions in the new Lockheed division. Mr. Bruce formerly headed QC programs for the Hughes Semiconductor Division and for Kwikset Locks, Inc. For the past year he has been assistant reliability project engineer for the Minuteman project at Autonetics Division of North American Aviation.

Joe Shordane, formerly of Ramo-Wooldridge Denver, is now manager of QC engineering at Lockheed Electronics and Avionics Division in Maywood, Calif.

Dave Cowan, formerly of Hughes Aircraft Co., is now QC manager at Continental Devices Co.

S. S. (Sy) Buschler, Hughes Products, has been elected temporary chairman of the new Orange County section.

. . . Milwaukee—**Bill Golomski,** past chairman of the Milwaukee section, has resigned as operations research manager at Oscar Mayer Co., Madison.

. . . Montreal—**George Williams** and **Fran Walters** were married in September. Mr. Williams is moving from Northern Electric to T.C.A.

Tom Farence is leaving Canadian Pratt & Whitney to join Northern Electric as methods engineer.

Vance Ward's family increased by one—membership potential good!

Maximum effort is being made by the executive committee to reduce the 900 point deficit in the Saddoris award competition.

. . . Northeast Tennessee—**Bill Morgan,** Northeast Tennessee section secretary, has been promoted to quality review supervisor at Sperry-Farragut, Bristol, Tenn.

J. T. Johnston of Raytheon, section vice chairman, gave two talks in August. On Aug. 18, in the Raytheon-Bristol cafeteria, he spoke to the Industrial Council of the Chamber of Commerce. The subject was "Guidance and Space Travel." The second talk, Aug. 27, "History of Guided Missiles," was presented to the Marine Corps Reserve Officers Training Unit, Bristol, Tenn.

Myles Duellman, S. E. Massengill Co., section treasurer, toured Europe this summer. In Middlesex, England, he visited the Glaxo Laboratories and reviewed their QC procedures on packaging materials.

. . . Pensacola-Mobile—**E. R. Pierson,** Chemstrand, has been transferred from Pensacola to Greenwood, S. C. The transfer has necessitated Mr. Pierson's resignation as chairman of the Pensacola-Mobile section.

John Comish, Brookley AFB, has been advanced to chairman of the Pensacola-Mobile section due to the resignation of the chairman.

D. H. Dannheisser, Chemstrand, has been elected vice chairman, and **Jack Hensley,** Brookley AFB, secretary.

A conservation committee has been established. **Fred Seguin,** Brookley AFB, has been appointed chairman.

. . . San Antonio—**John E. Goodwin** recently attended a six week course in management sponsored by the Air Force Institute of Technology in cooperation with the Ohio State University, at AMC, the Air Material Command Headquarters, Dayton, Ohio.

. . . San Diego—**R. G. (Bob) Goldinger,** Convair-Astronautics, has been appointed chief of off-site QC with an office at the Astronautics home plant in San Diego. Bob will be concerned primarily with QC matters at Atlas Missile Test Bases.

. . . St. Louis—**Simon D. Krasner** attended the three week training course in advanced statistical quality analysis at the Air Material Command Headquarters, Wright-Patterson AFB, Ohio.

. . . Toledo—**Dave Hettel,** chairman of the Toledo section last year, has been promoted to general manager of the Johnson-Ruth Machinery Co. Congratulations, Dave.

. . . Toronto—During previous years it has become increasingly apparent that there is a definite need for an introductory course to the regular University Extension course. This course would aid newcomers to the field and those line inspectors who want a basic grounding in the subject without any involved mathematics.

With this in mind, the section, in conjunction with the University of Toronto, has devised a course which will cover typical examples of QC recording and simple analysis, with demonstrations to illustrate statistical terminology.

Our regular statistical QC course has been revised and brought up to date to include Mil. Standard 414, "Sampling by Variables." Also there will be a session on "Reliability Theory." All the lectures in both courses will be given by members of the section. Both courses commence in October.

. . . Western Massachusetts—**Joseph Ferri,** a founding member and this section's first chairman, has retired as chief inspector of American Bosch Arms. Joe is going to keep active doing a bit of consulting work and has taken on the jobs of section advisor and section representative to the New England Conference.

. . . Worcester—**Leon Bouvier** will be associated with the American Optical Co., Southbridge, Mass., after September. He was formerly in the QC section of the Harrington-Richardson Arms Co., Worcester, Mass.

The Worcester section will miss one of its active members, **James Doyle,** who has accepted a position with the General Services Administration in Philadelphia, Pa. Our loss will be the Philadelphia section's gain.

Ralph Modlinger has been promoted to Sales representative for Astra Pharmaceutical Products, Inc., in the Washington, D. C. area. Ralph was formerly laboratory technician in charge of QC for the same company. The Worcester section extends congratulations to Ralph and we know his quality control experience will serve him well in his new job.

Robert Heman was appointed supervisor of statistical QC for the Harrington-Richardson Arms Co., Worcester, Mass., Aug. 24. Bob was formerly head of QC at the David Clark Co., Worcester.

District Nine Representative Paul M. Trotta, who has been transferred to Sao Paulo, Brazil, has appointed J. C. Grott and his successor.

Both Mr. Trotta and Mr. Grott are with the Cummins Engine Co., Inc., Columbus, Ind.

Mr. Trotta made the appointment due to the short advance notice of his new Brazilian assignment, though he has favored an election system in the selection of district representatives. With the agreement of David Chambers, executive secretary, and the representatives, Mr. Grott has been directed to assume office this year by appointment, and to conduct an election to select his successor next year.

ASQC Announces

Advancements and New Members

ADMISSIONS TO THE GRADE OF ASSOCIATE MEMBER

(as of June 30, 1959)

Aitken, Merl A., Charleston, W. Va.
Babcock, H. L., Charleston, W. Va.
Barrett, Samuel J., Charleston, W. Va.
Berg, Robert M., S. Charleston, W. Va.
Bogdan, Alfred S., Akron, Ohio
Chop, Allen, Oakland, Calif.
Craft, Clifford R., San Diego, Calif.
Dombrow, Roman J., Los Angeles, Calif.
Drummond, Charles C., Charleston, W. Va.
Eckles, Jack A., Cincinnati, Ohio
Flynn, Francis E., Jr., Lakewood, Ohio
Haines, Charles J., Spring Hill, W. Va.
Harris, Samuel C., St. Albans, W. Va.
Hauck, Raymond A., Covington, Ky.
Jennings, Edward, Fairfield, Conn.
Kearns, Junius W., Charleston, W. Va.
Kennett, Carlisle J., Charleston, W. Va.
Lamb, Charles B., Charleston, W. Va.
Lawson, Donald L., Joplin, Mo.
Lochner, Arnold C., Evansville, Ind.
Mac Rae, John F., Guelph, Ont., Canada
May, Alfred T., Cincinnati, Ohio
Ortberg, Donald, Evansville, Ind.
Peterson, Robert J., Santa Clara, Calif.
Pianka, Henry S., New London Conn.
Putthoff, Glennon M., Kansas City, Mo.
Remke, Robert A., Charleston, W. Va.
Rhudy, Paul A., Charleston, W. Va.
Roebke, Lee A., St. Albans, W. Va.
Schwartz, Melvin C., Evansville, Ind.
Stevens, William F., Buenos Aires, Argentina
Swango, William H., St. Albans, W. Va.
Whitcomb, Leslie, South Bend, Ind.
Wiersema, Judson H., Cincinnati, Ohio

(as of July 24, 1959)

Buncic, Louis, St. Petersburg, Fla.
Castown, Rudolph W., New York, N. Y.
Clarke, Herbert H., Latrobe, Pa.
Clow, Franklin, Valois, Que., Canada
Dahms, Henry B., Tucson, Ariz.
Fellner, Eugene L., Tucson, Ariz.
Fopma, Robert J., Cincinnati, Ohio
Fradenburg, Harold L., St. Petersburg, Fla.
Fried, A. S., Tucson, Ariz.
Gilroy, Wilbert M., Los Angeles, Cal.
Gordon, Joseph F., Marion, Ill.
Guthrie, Douglas W., Montreal, Que., Canada
Huth, Ralph F., Crown Point, Ind.
Kennelly, William F., Riverside, Ill.
Kwetcher, John G., Detroit, Mich.
Loesch, Joseph, Tucson, Ariz.
Michael, Paul J., Indiana, Pa.
Peterson, Alan W., St. Louis, Mo.
Prior, Gerald L., Glenview, Ill.
Rabe, Robert W., Largo, Fla.
Schultz, Theodore E., Hartsdale, N. Y.
Snyder, Harold Z., St. Petersburg, Fla.
Spader, Ewald G., Vienna, W. Va.
Starnes, Harlan M., San Antonio, Texas
Tuma, Kenneth R., Mt. Carmel, Ill.
Wade, Peter F., Collins Bay, Ont., Canada
Webster, David A., Atlanta, Ga.
Williamson, E D., Citrus Hgts, Cal.

ADMISSIONS TO THE GRADE OF MEMBER

(as of May 24, 1959)

Babinski, Czeslaw, Washington, D. C.
Bogdan, Alfred S., Akron, Ohio
Canetti, Alfred V., Lancaster, N. Y.
Dreyer, Ralph V., Jackson, Mich.
Hoff, Stanley A., Peabody, Mass.
Olson, Robert E., Kennewick, Wash.

(as of June 30, 1959)

Carter, Richard C., Detroit, Mich.
Fick, Rutger S., Kitchener, Ont., Canada
Fasshauer, Walter L., No. Arlington, N. J.
Rymasza, Edwin J., W. Hazleton, Pa.
Trott, Kenneth F., Lawrence, Mass.

(as of July 24, 1959)

Ackerman, Melvin, Aurora, Ill.
Ackermann, Ronald L., Milwaukee, Wis.
Akers, Carroll R., Santa Ana, Cal.
Allegri, Theodore H., Hyattsville, Md.
Anderson, Louis O., Detroit, Mich.
Anderson, Mildred H., Wichita, Kans.
Andree, Donald R. D., Culver City, Cal.
Anholt, Kenneth J., Pasadena, Cal.
Anthony, Donald W., Kansas City, Mo.
Ax, Robert, Westwood, N. J.
Ballan, James E., So. Natick, Mass.
Barker, Thomas E., Sharon, Pa.
Battistoni, Daniel C., Chicago, Ill.
Beall, Kenneth C., Cleveland, Ohio
Becker, Frank F., St. Petersburg, Fla.
Beiser, George A., Arlington, Va.
Belkin, Arnold, Pittsburgh, Pa.
Berg, Charles M., Beverly Hills, Cal.
Birch, Don L., Clemson, S. C.
Bishop, Paul H., Littleton, Colo.
Blanton, H. Elmore, Newtonville, Mass.
Blockley, Randell E., Benton, Ill.
Booker, Ben L., Kingsport, Tenn.
Boyd, John E., Jersey City, N. J.
Bratt, Harry A., Chicago, Ill.
Brocious, Phoenix, Ariz.
Bromm, Frederick H. Jr., Redondo Beach, Cal.
Brown, Charles H., Keene, N. H.
Browne, Robert L., Philadelphia, Pa.
Brumfield, Harvard, Ill.
Bunker, Robert C. Jr., Tucson, Ariz.
Burshtynsky, Raymond G., Tonawanda, N. Y.
Byrd, Harvey D., Black Mountain, N. C.
Cantor, Harold J., Seattle, Wash.
Carnes, Randal J. Jr., Warner Robins, Ga.
Carpenter, Floyd M., Pala Alto, Cal.
Carrier, Willis H. II, Oakland, Cal.
Carrubba, Eugene R., Wakefield, Mass.
Carter, Charles L. Jr., Sarasota, Fla.
Churchill, Ivan F., Andover, Mass.
Claflin, Malcolm L., Silver Creek, N. Y.
Clark, John W., Anaheim, Cal.
Clarke, Herbert H. Latrobe, Pa.
Clement, Walter L. Jr., Danville, Va.
Cole, Robert W., Menasha, Wis.
Colwell, Murray S., Hermosa Beach, Cal.
Congdon, Bernard R., Foxboro, Mass.
Cooper, Norman J., Lincolnwood, Ill.
Corbeil, Fernard S., Montreal, Que., Canada
Coulter, Richard V., Island Lake, Ill.
Crandell, Samuel S., Chicago, Ill.
Crichton, James S., Richmond, Va.
Curbow, Jerry N., Columbus, Neb.
Darling, Sturgis W. Jr., Houston, Tex.
Davis, Ray B., Denver, Colo.
De Pola, Theodore, Glenview, Ill.
De Vault, George E., Bristol, Tenn.
Dixon, Chadbourne R., Arlington, Mass.
Dvorak, Julius, Jamesburg, N. J.
Eagle, George R., Orlando, Fla.
Ebmeier, Adele C., Arlington, Va.
Elder, E. Ellis, West Chicago, Ill.
Eldridge, Paul, Baltimore, Md.
Elman, Saul J., Santa Susana, Cal.
Erwin, Fred L. Jr., Apopka, Fla.
Evans, Richard V., Ann Arbor, Mich.
Ferguson, Edward C., Richmond, Va.
Fiesler, Elmer W., Phoenix, Ariz.
Figueroa, Guillermo, Rio Pidras, Puerto Rico
Flint, Harold A., Essex, England
Flythe, Thomas Y., Merchantville, N. J.
Frank, Edward H., Livonia, Mich.
Gabriel, Charles P., Bryan, Ohio
Gardella, Frank A., Paramus, N. J.
Gaulden, Wylie E., Huntsville, Ala.
Geiser, Raymond W., Emlenton, Pa.
Gelfer, Melvin L., Brooklyn, N. Y.
George, George P., Arlington, Mass.
Gibson, Edward G., Wauwatosa, Wis.
Gillespie, Gerald D., Anderson, S. C.
Gilroy, Wilbert M., Los Angeles, Cal.
Goldberg, Gerald F., Bronx, N. Y.
Good, L. Cameron, Pittsburgh, Pa.
Gordon, Joseph F., Marion, Ill.
Gough, Edward W., Covina, Cal.
Grant, Ernest W., Indianapolis, Ind.
Grant, William L., Montclair, Cal.

1959 Membership Roster

Order Form

Plans are now being made for printing the 1959 Membership Roster, to be available for distribution during September.

Since the printing quantity will be based solely on advance orders, it is important that you place your order NOW! Use the convenient order form below.

Orders will be accepted only from members of ASQC.

American Society for Quality Control, Inc.
6197 Plankinton Building
161 West Wisconsin Avenue
Milwaukee 3, Wisconsin

10-59

Please send me a copy of the 1959 Membership Roster.

Member's Name .....
Address .....
City .....
Zone No. .....
State .....

Print or Type Address in Box. This will be used as label for mailing your copy of the Membership Roster.

GREENBLATT, ALBERT, Chicago, Ill.
GUILD, ROBERT R., Wellesley, Mass.
HAHN, THOMAS J., Dover, Del.
HANSEN, LYLE B., Warren, Mich.
HANSON, HOWARD C., St. Paul, Minn.
HARPER, DENVER L., Cincinnati, Ohio
HARRIS, GERALD C. M., Grosse Pointe, Mich.
HARTGROVE, EARL H. JR., Wilmington, Del.
HAYES, DAVID J., Millville, Pa.
HEAL, CHARLES W., Herrin, Ill.
HERBSTHOFER, FRANK L., Chicago, Ill.
HEMMINGSEN, Columbus, Neb.
HENAULT, MARTIAL N., So. Boston, Mass.
HENDERSON, ROBERT W., Wauwatosa, Wis.
HERALD, CHARLES E., S. Charleston, W. Va.
HERMANN, HARRY H. JR., Cincinnati, Ohio
HILL, HARRY E., Sugar Grove,Ill.
HILLER, NORMAN H., Milford, Conn.
HILLES, LEWIS C., Torrance, Cal.
HOEHN, ARTHUR M., Fraser, Mich.
HOSTETLER, ALLEN C., Herrin, Ill.
HOUGH, NORMAN S., Columbus, Ohio
HREHOV, JOHN G., Marion, Ohio
HUBBARD, SHERMAN H., Kingsport, Tenn.
JEFFERSON, ALBERT J., Huntington, N. Y.
JESSOP, WILLIAM N., Leamington, Spa, Eng.
JEWETT, JOHN R., Bay Village, Ohio
JOHNSON, ALLAN, Ottawa, Ont., Canada
JOSING, STEVE, West Allis, Wis.
KAIDER, HENRY J., Richmond, Cal.
KELLEY, HARRY W., St. Paul Park, Minn.
KELLEY, JAMES R., Maple Hgts., Ohio
KELLEY, WILLIAM D. JR., Brigham City, Utah
KENNON, WILLIAM B., San Antonio, Tex.
KERINS, DONALD J., Mattapan, Mass.
KIRSCH, IRVING, Forest Mills, N. Y.
KOPP, SYLVANUS A., Alderwood Manor, Wash.
KRAUSE, BERNHARDT C., Elmhurst, Ill.
KULLMAN, LAWRENCE W., E. Orange, N. J.
KUNNING, FRANK O., Tulsa, Okla.
KURTZ, CURTIS E., Herrin, Ill.
LANE, FRANK R., Albuquerque, N. M.
LATZKO, WILLIAM J., W. New York, N. J.
LAUERMAN, FRANK H., Burbank, Cal.
LAVERS, ROBERT A., Fairfield, Conn.
LAZARUS, STANLEY D., Euclid, Ohio
LEE, CHETWOOD B. JR., Trenton, N. J.
LEE, PAUL M., Santa Ana, Cal.
LEMONS, LLOYD E., Battle Creek, Mich.
LENNON, ROBERT A., La Mirada, Cal.
LESSIG, HARRY J., Elgin, Ill.
LEWEKE, DELBERT H., Harvey, Ill.
LEWIS, VERNON L., Columbus, Ohio
LIDDELL, RAYMOND, Greenock, Scotland
LIPPHARDT, WILLIAM R., Chicago, Ill.
LISSON, JEROLD B., Syracuse, N. Y.
LOERCH, GEORGE D., Tacoma, Wash.
LOUPOS, JOHN, Schenectady, N. Y.
LOWERY, WILLIAM E., Newton Hlds., Mass.
LOWMAN, FRANK A., Richmond, Va.
LUCKE, ROBERT V., Naugatuck, Conn.
MACCLEMMY, GEORGE L., Alhambra, Cal.
MADDOX, DONOVAN L., Buena Park, Cal.
MANDELL, MANUEL, Auburndale, Mass.
MANISCHALCHI, MARIANO, Tucson, Ariz.
MANTOR, EARL L., Chicago, Ill.
MANZI, ANTHONY B., New Britain, Conn.
MARCHIO, EMILIO JR., Thompsonville, Conn.
MARYANSKI, EDWARD, Bristol, Va.
MATTHEWS, KEITH F., Garden Grove, Cal.
MAYNE, SAMUEL C. JR., Houston, Tex.
MCCAWLEY, ROBERT L., Asheville, N. C.
MCCLESKEY, Homestead, Pa.
MCCOLLEY, EARL S., La Vale, Md.
MCDERMOTT, THOMAS C. JR., Anaheim, Cal.
MCDONALD, HUGH P., Cleveland, Ohio
MCKEE, WILLIAM H., Carbondale, Ill.
MCLIMONT, DAVID W., Ottawa, Ont., Canada
MCNEILL, DONALD, No. Burnaby, B. C., Canada
MCQUOWN, JACK S., Tucson, Ariz.
MEDINA, JOHN W., Reading, Mass.
MEYERS, LEONARD J., Cheverly, Md.
MICHAEL, PAUL J., Indiana, Pa.
MILLER, JOHN E., La Habra, Cal.
MILLER, ROBERT T., Cleveland, Ohio
MIKOL, ERWIN F., Morton Grove, Ill.
MILLNER, JOHN H., Renton, Wash.
MOE, ROBERT E., Owensboro, N. Y.
MOHLIE, J. RAYMOND, Augusta, Mich.
MOLDWIN, STANLEY S., Brooklyn, N. Y.
MONAGHAN, JOHN H., Hampden, Mass.
MORRISON, JOHN W., New Kensington, Pa.
MOTT, FRANK L., Newport, R. I.
MOYER, ROBERT C., Highland, Ill.
MUNSON, GERALD W. JR., Saegertown, Pa.
MYERS, LAWRENCE, Cleveland, Ohio
NEMANICH, EDWARD J., Plainfield, Ill.
NEWMAN, BERNARD L., Los Angeles, Cal.
NONNEMACHER, CLARENCE E., Clark Summit, Pa.
NOVAK, WALTER K., Drayton Plains, Mich.
NYQUIST, RUSSELL S., St. Paul, Minn.
OBARSKI, DONALD F., Milwaukee, Wis.
OLSON, ROBERT F., Winchester, Mass.
OSBORN, ABRAHAM, Harvard, Mass.
OWENS, EARL E., Marion, Ill.
PACKMAN, RICHARD J., Feltham, Middlesex, Eng.
PAQUIN, LEO L., Boucherville, Que., Canada
PAUL, DONALD L., Madison, Wis.
PECK, FREDERICK A., Santa Monica, Cal.
PEARSE, ROY J., St. Joseph, Mich.
PERKINS, STANLEY E., Cincinnati, Ohio
PETER, KURT F., Union, N. J.
PETERSEN, MARTIN A., Kenosha, Wis.
PETERSON, ALAN W., St. Louis, Mo.
PETERSON, ARNOLD P., Knoxville, Tenn.
PHELPS, ROBERT H., South Glastonbury, Conn.
PHILLIPS, SIDNEY H., Evanston, Ill.
PIKE, DON, Los Angeles, Cal.
PLONKO, JOSEPH, Westfield, N. J.
POVICH, JOSEPH, Dunellen, N. J.
PRATT, RICHARD H., Reading, Pa.
PRESTON, JOHN E., Harvard, Ill.
PRIEPKE, RUDOLF J., Dayton, N. J.
PRIOR, GERALD L., Glenview, Ill.
RAINES, MARTIN L., Newport News, Va.
REEDER, WESLEY F., Hamilton, Ont., Canada
RICE, ANTHONY N., Huntsville, Ala.
RICHARDS, BETTY J., E. Cleveland, Ohio
RISO, JOHN O., State College, Pa.
ROCKWELL, DAVID J., Atkinson, N. H.
ROGERSON, CONRAD A., Marion, Ohio
RICHARDS, JACK P., Drexel Hill, Pa.
ROSENBAUM, JULES L., Santa Monica, Cal.
ROUNDS, HUGH G., Ogden, Utah
RUND, ROBERT C., Hammond, Ind.
SANBORN, DAVID M., Waltham, Mass.
SANDERS, PAUL G., Libertyville, Ill.
SANKS, JOHN L., Kingsport, Tenn.
SANTORO, MARTIN F., Brooklyn, N. Y.
SANTUCI, JOHN P. JR., Ypsilanti, Mich.
SCARANO, CHRISTY J., Dorchester, Mass.
SCARINGI, JOHN H., Billerica, Mass.
SCHNEIDER, SYLVESTER P., Du Quoin, Ill.
SCHROCK, MELVIN L., Elgin, Ill.
SCHROEDER, CLIFFORD D., Columbus, Nebr.
SCHULTE, LEONARD J., Ft. Thomas, Ky.
SCHULTZ, THEODORE E., Hertsdale, N. Y.
SEGUIN, YVAN, Hawkesbury, Ont., Canada
SHAVNEY, STEPHEN A., Long Island City, N. Y.
SHELMIRE, RAYMOND E. JR., Corona, Cal.
SHOPSKY, WILLIAM E., Monroeville, Pa.
SILVER, EDWARD E., Winston Salem, N. C.
SIMPSON, JOHN R., Marion, Ill.
SKOCIC, GEORGE P., Bedford, Ohio
SLOAT, ARTHUR R., Yonkers, N. Y.
SLOTSKY, GORDON J., Kew Gardens, N. Y.
SMITH, THOMAS H., Du Quoin, Ill.
SMOLAK, JEAN F., Somerville, N. J.
SOMERS, RICHARD M., Gardena, Cal.
SPACH, RICHARD W., Arlington, Va.
SPRAGUE, EDWIN C., West Chicago, Ill.
STARNES, HARLAN M., San Antonio, Tex.
STERNSDORF, CURT C., Philadelphia, Pa.
STETSON, EVERETT H., Blairsville, Pa.
STOTT, RONALD J., Beverly, N. J.
STRAND, DONALD A., Walworth, Wis.
STROHMEIER, LEON E., Marion, Ill.
STRONG, JOSEPH N., Leamington, Ont., Canada
STRY, HENRY F., Buffalo, N. Y.
SUMNER, JOHN K., Chicopee Falls, Mass.
SUSSMAN, BERNARD, Wayneboro, Va.
SWAUGER, MELVIN S., Denver, Colo.
TALLENT, GEORGE R., Dracut, Mass.
TALLEY, HOLLAND R., Asheville, N. C.
TITCOMB, RALPH M., Ballston Lake, N. Y.
TRUESDALE, VERNON H., Medina, Wis.
TUMA, KENNETH R., Mt. Carmel, Ill.
UHLER, CARL J., Burton, Ohio
VAN DOZER, LELAND W. JR., Binghamton, N. Y.
VANCE, FRED J., San Mateo, Cal.
VAUGHAN, CYRIL D., Brockville, Ont., Canada
VITKUS, FRANCIS A., Dorchester, Mass.

(Cont. on page 40)

Product Education Service

These advertisers provide educational information on their products, expanding the services of your journal, *Industrial Quality Control*.

Their support is twofold. First they place the latest information on product development at your finger tips. In addition their purchase of advertising space supports your Society and this publication. Continue to advance your Society by using their products and services and encourage others to do so. They all merit your consideration.

When writing or talking to advertisers to inquire about their products, always remember to say you saw their ad in *Industrial Quality Control*.

Advertisers in this issue:

A-1, **Acme Scientific Co.** 28
A-2, **B & H Instrument Co.** 6
A-3, **Comtor Co.** 31
A-4, **Curtiss Wright (Princeton Division)** 4, 5
A-5, **Dallas Publishing House** 27
A-6, **DoAll Co.** 20, 21, 24
A-7, **W. R. Grace & Co., Davison Chemical Division** ..... IBC
A-8, **Jones & Lamson Machine Co.** .. 13
A-9, **Lightning Calculator Co.** 6
A-10, **Lufkin Rule Co.** 26
A-11, **Monroe Calculating Machine Co., Inc.** 15
A-12, **Sheffield Corp.** ..... IFC
A-13, **Stanford University Press** 6
A-14, **Unit Process Assemblies, Inc.** .. 29
A-15, **Veeder-Root, Inc.** ..... 22, OBC
A-16, **Carl Zeiss, Inc.** 1

Advertisers of Previous Issues of Volume XVI

Airborne Instruments Laboratory
American Optical Co.
B. C. Ames
Bell Telephone Laboratories
Cadillac Gage Co.
Custom Scientific Instruments, Inc.
Elliott Service Co.
Interscience Publishers, Inc.
Monode, Inc.
Process Simulation
Texas Electronic Products Corp.

Mail the handy coupon below to obtain further information about any of the items appearing in advertisements or new products and new literature described in the "What's New?" department, pages 27-30.

INDUSTRIAL QUALITY CONTROL
Room 6197 Plankinton Building
161 West Wisconsin Avenue
Milwaukee 3, Wisconsin

Att.: Product Education Service, 1059

Please send me further information as indicated below:

(mark key number of advertisements, new products or literature)

ADVERTISERS	NEW PRODUCTS	NEW LITERATURE
A— _____	P— _____	L— _____
A— _____	P— _____	L— _____
A— _____	P— _____	L— _____
A— _____	P— _____	L— _____

Name _____

Address _____

_____

City _____ Zone No. _____ State _____

Second Printing . . .

in one compact 12-page reprint you can get the ANOVA material published in the August, September and October 1956 issues of Industrial Quality Control for quick and easy reference.

"Fundamentals of Analysis of Variance"
by Charles R. Hicks

50c per copy

Discount for Bulk Orders: 10% for 10 or more copies; 25% for 50 or more.

American Society for Quality Control
161 W. Wisconsin Ave.
Milwaukee 3, Wis.

Send me.....copies of "Fundamentals of Analysis of Variance."

Enclosed $.....

Name .....

Address .....

City..... State.....

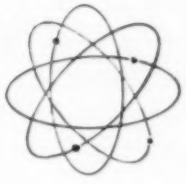
QUALITY ***COST*** *CONTROL*

Prestige New England electronics manufacturer seeks number two man for permanent position in multi-plant operations. Acting as a consultant you will advise on all phases of quality cost control on a corporation wide basis.

Industrial management or corporate staff background plus at least five years of applicable experience will qualify an applicant who wants heavy responsibility. This newly established corporate group offers every opportunity for rapid growth both professionally and financially.

Reply to Box #16R2

Needed in the field of ATOMIC ENERGY



As contract operator for the Atomic Energy Commission, the National Lead Company of Ohio utilizes the latest technical equipment and technology to produce uranium fuel elements for use in nuclear reactors.

- **STATISTICIAN:**

  Involves statistical analysis and presentation of data. B.S. in any physical science or B.A. in math, minor in statistics. Minimum two years' experience—industrial statistics.

Please send resume of education, experience and salary requirements to

EMPLOYMENT SUPERVISOR, Dept. J-109,

National Lead Company OF OHIO

P. O. Box 158, Cincinnati 39, Ohio

clinics, conferences, and courses

OCTOBER

. . . ***23-24—The 1959 Western Regional QC Conference will be sponsored by the Phoenix Valley of the Sun section at the Ramada Inn, Phoenix, Ariz., contact Dan Casky, conference chairman, 800 W. Butler Drive, Phoenix, Ariz.***

. . . ***24—Third Annual Forum, Ecole Polytechnique, Montreal, contact R. Vance Ward, Canadian Industries Ltd., P. O. Box 10, Montreal, Canada.***

NOVEMBER

. . . **2-5**—11th Exposition of ARI, Atlantic City, N. J., sponsored by Air-Conditioning and Refrigeration Industry, 1346 Connecticut Ave., N.W., Washington 6, D. C.

. . . **2-6**—19th Annual Convention of the Society for Nondestructive Testing, Hotel Hamilton, Chicago, Ill., theme "Product Reliability through Nondestructive Testing," contact Donald T. O'Connor, convention chairman, Machlett Laboratories, Springdale, Conn.

. . . **4**—Regional Technical Conference on Plastics in the Shoe Industry at the Statler Hotel, St. Louis, sponsored by the St. Louis section of the Society of Plastics Engineers, Inc., contact Norman James, E. I. du Pont de Nemours & Co., Inc., 818 Olive St., St. Louis 1, Mo.

. . . ***4-6—The 13th New England QC Conference will be held at the Sheraton Biltmore Hotel, Providence, R.I., with the theme, "Quality Engineering Assures Reliability." A basic QC course will also be offered. Contact Wesley S. Gahagen, General Electric Co., Somersworth, N.H.***

. . . 18-20—Color Control for the Graphic Industries seminar at the Rochester Institute of Technology, contact Warren Rhodes, director, Graphic Arts Research Department, Rochester Institute of Technology, Rochester 8, N. Y.

. . . ***19-20—The Seventh Aircraft and Missile Division Conference, Dallas, Texas, contact Herb Epstein, Pasadena, Texas.***

DECEMBER

. . . ***4-5—Princeton-Metropolitan Conference, contact Frank Kroll, Esso Standard Oil, Box 222, Linden, N. J.***

JANUARY

. . . ***11-13—Sixth National Symposium on Reliability and QC, Hotel Statler, Washington, D. C., contact I. W. Schoeninger, Centralab Div., Globe Union, Milwaukee, Wis.***

. . . **25-Feb. 4**—The 1960 Engineering and Management course for the professional development of managers and engineers will offer a choice of 22 subjects at the University of California, Los Angeles. Information on registration and living accommodations may be obtained from Reno R. Cole, College of Engineering, University of California, Los Angeles 24, Calif.

FEBRUARY

. . . ***27-28—District 3 Conference, Hotel Statler, N.Y. City, contact Edwin Shecter, Sonotone Corp., Elmsford, N. Y.***

MAY

. . . ***16-18***—Symposium on Statistical Methods in the Pulp and Paper Industry sponsored by the Finnish Paper Engineers' Association in Helsinki, contact Nils J. Lindberg, general secretary of the symposium, the Finnish Paper Mills Association, Helsinki, Finland.

. . . ***24-26—14th Annual Convention and Exhibition of the American Society for Quality Control, Hotel Sheraton-Palace, San Francisco, Calif.***

. . . ***30-31, June 1—Mid-Pacific Conference, Honolulu.***

ASQC Annual Convention Future Dates

May 24-26, 1960	***San Francisco***
May 22-24, 1961	***Philadelphia***
May 23-25, 1962	***Cincinnati***
May 20-22, 1963	***Chicago***

Mid-Pacific Conference

May 30, 31, June 1, 1960 Honolulu

A Big Texas Welcome Awaits You!

Countdown . . . . **03 Management**
. . . . **02 Engineering**
. . . . **01 Quality Control**
. . . . **0 Reliability**

Plan Now to Attend

The 7th Annual Aircraft and Missile Conference

November 19-20, 1959

SHERATON-DALLAS HOTEL
DALLAS, TEXAS

Sponsored by the Dallas-Fort Worth section of ASQC with the cooperation of:

- The Dallas Chamber of Commerce
- Southern Methodist University
- Texas Manufacturers Association
- Fort Worth Chamber of Commerce

TWENTY-FOUR SPEAKERS—THREE SIMULTANEOUS SESSIONS
LUNCHEONS—DINNERS—SOCIALS—LADIES' PROGRAM

QUALITY CONTROL

RELIABILITY ENGINEER

With experience desired in parts qualification, lot acceptance tests, equipment reliability testing; able to develop effective liaison with Engineering, Purchasing and Production. Knowledge of Quality Control procedures necessary. Degree in Electrical Engineering or comparable experience required.

Send resume giving complete job experience and educational background, also salary requirements, to:

Kel Rowan
Professional Personnel Representative

MOTOROLA

Western Military Electronics Center
8201 E. McDowell Road
Scottsdale, Arizona

QUALITY CONTROL ENGINEERS

BS in engineering or one of the sciences. Quality control experience with semiconductors highly desirable.

These openings are with Sylvania's Semiconductor Division in suburban Boston, where there is ample opportunity for recognition and reward.

Please send a resume to Arthur Sloane

SEMICONDUCTOR DIVISION

SYLVANIA

Subsidiary of GENERAL TELEPHONE & ELECTRONICS

100 Sylvan Road – Woburn, Mass.

INDUSTRIAL and QUALITY CONTROL ENGINEERS

Graduate engineers from accredited colleges with experience in statistical quality control or quality assurance. Also, experience in technical writing or procedures writing desirable.

Sandia Corporation, located in Albuquerque, N. M., is engaged in research and development of nuclear weapons and other projects for the AEC. Albuquerque is a modern city of about 225,000; has an excellent climate and many cultural and recreational attractions. Winters are mild, summer nights are cool, and there's plenty of year-around sunshine. Sandia's liberal employee benefits include generous vacations, retirement and insurance plans and a graduate education assistance program. Paid relocation allowance.

Send resumé to Personnel Employment Section 564.

SANDIA CORPORATION

ALBUQUERQUE, NEW MEXICO

(Cont. from page 37)

WALLACE, RANDALL T., Garden City, Mich.
WARD, EDWARD H., Richmond, Va.
WATANABE, SABURO, Setagaya, Tokyo, Japan
WEBSTER, DAVID A., Atlanta, Ga.
WEBSTER, RUSSEL J., Los Angeles, Cal.
WEISENFLUH, N. DONALD, Greensburg, Pa.
WELCH, ARTHUR L., Denver, Colo.
WERNICOFF, TEVIS M., Vineland, N. J.
WHITLOCK, JAMES F., Willoughby, Ohio
WILEM, FRANK J., Milford, Ohio
WILLIAMSON, E. D., Citrus Hgts., Cal.
WILLIAMSON, FRED L., Buffalo, N. Y.
WILT, JULIUS C., Akron, Ohio
WIMMER, VIRGIL L., Carbondale, Ill.
WOLFE, WILLIAM D., Minneapolis, Minn.
WRIGHT, DICK JR., Gaton Mills, Ohio
YOUNGBLOOD, JOE T., Milwaukee, Wis.

POSITIONS AVAILABLE

Address all replies to box number references to: American Society for Quality Control, Room 6197 Plankinton Bldg., 161 W. Wisconsin Ave., Milwaukee 3, Wis.

Quality Managers
Quality Control Engineers
Reliability Engineers

Professional placement service by specialists in these fields. Many fee-paid positions.

Quality Control Personnel Service
267 Hawthorne St., Malden, Mass.
Send resume, salary, geographic preference.

Quality Control Supervisor
Customer Service Man

Multi-plant menswear worsted manufacturer (spinning, weaving, and finishing) has new opening on its staff for setting up and directing Quality Control and Customer Service Departments. Salary open. Replies strictly confidential. Send resumes to box 16R1.

CONSULTING SERVICES

Responsibility of the American Society for Quality Control, Inc., for Consulting Services advertising is limited to certification that advertisers hold the grade of membership in the Society stated in their advertisements. Qualification requirements for the several grades of membership are set forth in the Constitution of the Society.

Quality Control Consultant
HARMON S. BAYER
Fellow, ASQC
1154 Book Building — Telephone
Detroit 26, Michigan — WOodward 5-3796

Management Controls
FOUNDED IN 1945
References and Literature on Request
Senior Partner: W. E. JONES, *Fellow, ASQC*
699 Rose Ave., DES PLAINES, ILL.
Vanderbilt 4-6533

QC Planning — Defect Prevention
LEONARD A. SEDER
FELLOW ASQC
267 HAWTHORNE ST.
MALDEN, MASS.
DAvenport 4-5446
Organizing for Quality — Training

Quality Control Consultant
THOMAS A. BUDNE
Fellow, ASQC
3 Dunster Road — Great Neck, N. Y.

VENDOR SURVEYS - INSPECTION
A National Organization with Engineers in Nine Key Centers Coast to Coast.
WRITE FOR SCHEDULE OF FEES
QUALITY CONTROL ENGINEERS, INC.
8380 WILSHIRE BOULEVARD — LOS ANGELES 48, CALIFORNIA

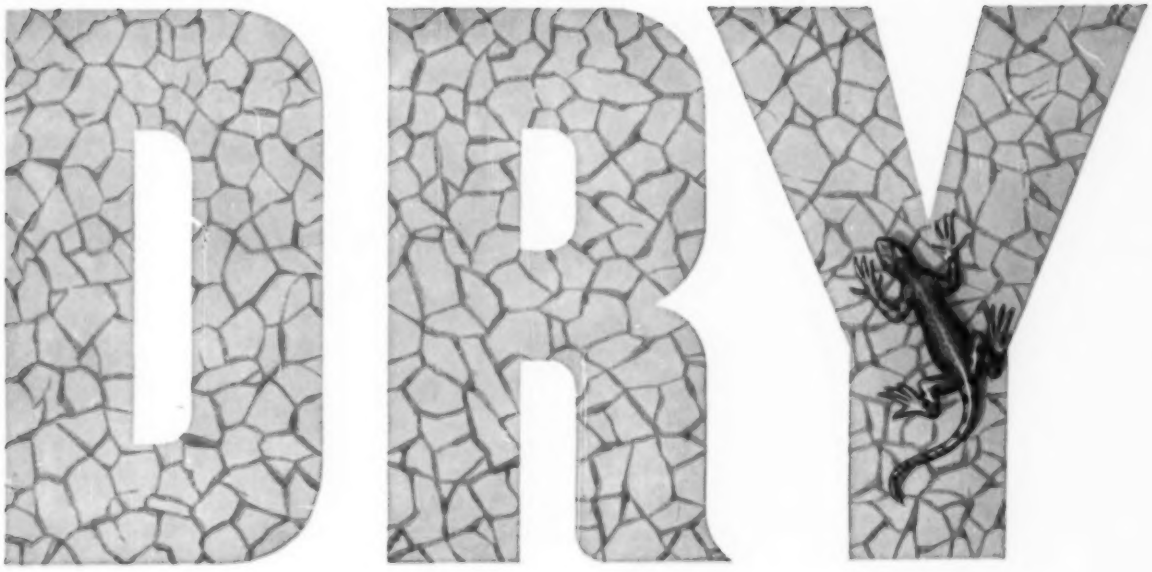
R.R. 3, Box 288
Greenwood, Indiana
SUTHERLAND-JACOBSON & ASSOCIATES
Consultants in Quality Control
Inspection Procedures, Process Controls, Statistics for Research and Development
M. L. SUTHERLAND, Ph D. Fellow ASQC — H. J. JACOBSON Fellow ASQC

BERNARD HECHT
Quality Control & Reliability Specialist
Fellow Founding Member, ASQC
Planning and Staffing
Q. C. Organizations
Training in Statistical Methods
Quality Assurance Programs
5418 Wilshire Blvd. — Los Angeles 36, Calif.
WEbster 8-0121

EDWARD A. REYNOLDS
Fellow, ASQC
Ligonier, Pa.

Since 1945
RALPH E. WAREHAM
Fellow, ASQC
122 Orchard Ridge — Telephone
Consulting Services in Quality Control
Chappaqua, New York — Chappaqua 1-0715

If it must stay



specify super-adsorptive Davison Silica Gel

One cubic inch of Davison Silica Gel has an adsorptive surface of 90,000 square feet—an area larger than two city blocks. This capacity has made Davison Silica Gel the favored desiccants for air and gas dehydration wherever rust, corrosion, mildew or other moisture problems exist. For instance, Davison desiccants are used to protect tropical shipments, to clean and dehydrate air and natural gas — refrigeration systems — blast furnace gases — and in oxygen plants. Perhaps the application of a Davison desiccant to *your* moisture problems is in order. Write or call Packaging Sales Office, Dept. 34110, 853 Broadway, New York 3, N. Y. GR 3-7876.

W.R. GRACE & CO.
DAVISON CHEMICAL DIVISION
BALTIMORE 3, MARYLAND

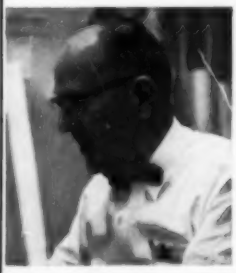
"VARY-TALLY is used to check piece-work production"

"We use a VARY-TALLY for statistical distributions and analytical breakdowns"

"VARY-TALLY is used for production, quality and inventory control"

"VARY-TALLY helps us in statistical quality control — counts up to 8,000 pieces of data per tally"

"We check various types of product damage on a VARY-TALLY"



Different industries with different quality control problems — all solved by the versatile Vary-Tally by Veeder-Root. The many questions of what . . . why . . . how much . . . how many . . . where . . . in what condition . . . are all answered through the use of Vary-Tally — the multiple unit reset counter that counts everything countable.

All kinds of Industries Count On

VARY-TALLY

VARY-TALLY CAN BE SUPPLIED IN NEARLY ANY COMBINATION OF UNITS

YOU CAN USE A VARY-TALLY IN YOUR BUSINESS . . . WE'LL BE GLAD TO SHOW YOU HOW . . . WRITE FOR COMPLETE DETAILS.

Veeder-Root INC.

HARTFORD 2, CONNECTICUT

"The Name that Counts"

Hartford, Conn. • Greenville, S. C. • Altoona, Pa. • Chicago • New York
Los Angeles • San Francisco • Seattle • St. Louis • Montreal
Offices and Agents in other principal cities

999-62